

Vol. LXXIV—No. 3

Hamilton, Illinois, March, 1934

Monthly, \$1.00 a Year

Do Your Bees Get "Overcontrollitis"?

By J. W. Braithwaite,
Manitoba.

IN an article which he contributed to a prominent American periodical the late Sir Henry Thornton wrote: "A railroad is never completed." It has many times occurred to me that a beekeeper's knowledge is like the railroad in that respect. The longer a thoughtful person keeps bees and the more he learns about them, the more he realizes how limited his knowledge is and, oftentimes, the humbler he feels. But whilst it is certainly true of all of us that as beekeepers we still have much to learn, it is equally true that we do learn quite a lot of valuable lessons regarding our bees as our experience with them increases from year to year.

When my thoughts first turned seriously to beekeeping I sent for a copy of "Starting Right with Bees." By the time I had digested thoroughly its contents my imagination was fired, and I purchased the "A. B. C. and X. Y. Z." and studied it diligently all winter, also subscribing to "Gleanings" and the "American Bee Journal." With the approach of spring I purchased a beginner's complete outfit—veil, smoker, hive tool, embedder, bee brush and all the rest of the paraphernalia even an uncapping knife. In due time four colonies were set out in their full glory—nice white hives with green stands and tops.

I took this beekeeping business very seriously with a head full of theory and a heart full of ambition. I was determined to keep my bees as they should be kept; and I resolved that they, on their part should act according to plan or I would know the reason why.

As I look back on those days now it seems that my main idea was that success depended primarily, if not al-

most entirely, upon the prevention of swarming. Picture me, then, as I set out to examine my bees. With smoker going full blast I remove the cover from hive No. 1 and set it down at the side in the accepted manner, to use as a seat. Commencing at one side I take out the first frame and place it alongside the hive, and then carefully examine the remaining frames one by one, moving them over as I do so until all have been gone over. Any sign or suggestion of a queen-cell is carefully and thoroughly eradicated, and I am usually not satisfied with anything less than the actual sight of the queen engaged in her laying activities. This procedure I would follow religiously every week.

In spite of this (or should I say because of this?), my bees did not thrive. They certainly did not swarm (I never had the delight of witnessing and capturing a swarm until I had been keeping bees for three years), but just as certainly, though to my surprise, some of them became queenless. They did not build up as I thought that they should.

I was quite a while finding out the reason for their shortcomings but it did finally dawn upon me in a dim, uncertain kind of way that my bees were suffering from "Overcontrollitis"—a trouble which some of you young and enthusiastic beekeepers may have without being aware of it.

My awakening was gradual as my experience unfolded. During the late spring of this first year one of the government inspectors paid me a visit just about the time that one of my weekly inspections was due. "Ah," said he, opening one hive and showing me the commencement of queen-cells, "superseding, I see." And then he put the frame back into the hive,

queen-cells and all. "What shall I do about it?" I asked. "Leave them alone," he replied. "They'll be all right." This was lesson No. 1 in practical experience, conveying the idea that even queen-cells are desirable at times.

Three farmer friends of mine had bees at this time. I knew that they were all more or less afraid of their bees and that they usually had swarming trouble during the season; so, in my zeal, I offered to look over their bees for them. Two of them had two hives each and the other friend had three. The three colonies had been wintered on their summer stands without any preparation or protection whatsoever except for the addition of a super of honey on top of the brood chamber and a further empty super containing a bag of chaff on top of this to absorb the surplus moisture. To my surprise all of these bees in the three different places were very much stronger than mine, and the ones that had been wintered outside were absolutely boiling over with bees and had two chambers chock-full of eggs and brood. This was towards the end of June at the commencement of our honeyflow. At that time maximum strength is desirable, and these bees had never been examined that season at all. This certainly gave me something to think about.

Of course, this example represents the other extreme and I do not wish to convey the impression that bees should be left entirely to their own devices. There is a happy medium somewhere, and we must find it if we can. Some of these colonies were just ready to swarm and, if left alone, would have done so within a few days and lost a lot of their strength in this way, but at the time

my bees certainly suffered from the comparison which I naturally made. I decided that my periodical examinations were not proving as beneficial as they should. Indeed, the very reverse seemed to be the case. From that time on I modified my system somewhat, cutting down spring examination to a minimum.

A couple of years ago I was compelled to be away from home during the months of May and June. As it is during these months that bees must build up in order to be ready for the honeyflow, I was afraid that it might be disastrous to my bees to leave them for long. However, there was no help for it. A friendly inspector offered to pay a couple of visits to my apiary during my absence and look over the bees for me. Another good friend agreed to give each colony a super at the end of May when the dandelions came into bloom, and I thought possibly with these attentions things might not turn out too badly. I expected to lose on account of being away so long and was prepared to do so. I considered myself fortunate to have secured the promised help.

I returned on the last day of June and was most agreeably surprised to find that the bees were in uniformly better condition than they had ever been previously at this time of the year. As far as I could ascertain, only one colony out of the sixty-five had put out a swarm.

This experience convinced me, beyond possibility of a doubt, that a lot of spring manipulation is not only unnecessary, but is positively detrimental to the colony.

Looking back now upon my early experiences I can see that much that I did in my early zeal was not only mistaken but harmful. Many times I must have cut out queen-cells that had better have been left alone, and often must I have chilled the brood with my lengthy examinations, besides exciting and upsetting the colonies so that queens were liable to be ballied. I have come to think that in some respects a colony of bees is like an automobile. Beyond certain necessary attentions both are better left alone as long as they are getting along all right.

The experienced beekeeper can go through his bees very quickly; the large commercial honey producer cannot afford to spend too much time with individual colonies. Both learn to cut their routine down to lower and even lower minimums of effort. Consequently, neither is ever bothered by overcontrolitis. I do believe that by his excessive zeal and through lack of practical experience many a novice and small beekeeper actually manipulates away chances of a good honey crop.



Canadian Beekeeping

*By C. B. Gooderham,
Dominion Apiarist,
Canada.*

that market to the Canadian producer.

THE saying, "The resources of Canada are inexhaustible," is true of no food product more than of honey. From coast to coast there is an abundance of nectar secreting flowers which produce each year large quantities of nectar that only bees can gather and conserve as food for the use of man. If bees are not present to gather this harvest, it is wasted, and it is no exaggeration to say that millions of pounds of the choicest honey remain ungathered each year. The abundant sources of nectar and the high average of favorable weather for its secretion and gathering, makes Canada a wonderful country for the keeper of bees. Furthermore, the major part of Canada's honey crop is of unsurpassed quality, it being light in color, of good density and delicately flavored.

Prior to 1921, Ontario and Quebec were the only provinces producing a surplus of honey and this surplus found a ready market in the other provinces of the Dominion. At that time comparatively little honey was produced in British Columbia, Manitoba and the Maritime Provinces, while in Alberta and Saskatchewan apriaries were few and far between. The situation, however, has changed, for not only have the older provinces increased production within their borders, but the newer provinces have demonstrated beyond doubt that not only can they produce honey of equal quality to that produced anywhere else in the Dominion, but they can also produce in quantities that threaten the supremacy of the other provinces.

Because of increased production, wider markets became necessary. A cooperative selling organization was formed in Ontario, and export markets were sought with satisfactory results. Early in 1924 the above mentioned company exported its first honey, and for that year the total exported from Canada was 513,038 pounds, of which amount 295,641 pounds went to the United Kingdom. In 1932 the total export figures reached 2,298,350 pounds, and of this amount 2,161,800 pounds were shipped to the United Kingdom which indicates the growing importance of

The largest honey crop produced in the history of Canada was in 1931 when the total crop was estimated to be 29,666,097 pounds. Heavy winter killing of clover in 1931-1932 and 1932-1933 together with drought conditions over the greater part of Canada in 1931 and 1932 caused a heavy reduction in yields. Judging from the requests for information relative to beekeeping, the two years of short crops do not seem to have had any disheartening effect on beekeepers in general. More packages than ever were imported during the year just passed than ever before, and it is quite possible that the imports will be just as heavy this coming spring. The increased cost of package bees, however, may have a deterring effect, but on the other hand more interest seems to be shown in the possibilities of wintering bees, especially in the prairie provinces.

The winter to date has been a severe one. For those who fed and protected their bees well, this should cause little or no anxiety, but where food and protection were skimped, heavy losses may occur during the next two months.

Clovers were reported to be in better condition last fall than for the past two years. A heavy covering of snow also promises better protection from winter killing than for the past few winters, while the same snow will also provide adequate moisture for starting the plants off to a good growth in the spring.





FAMOUS SAYINGS

February—

a h o e t I I o d G s y e B u a E t T u o H n e e s o

"Eat Thou Honey Because It Is Good"

—Solomon, Proverbs 24:13.

Center Shot, Once More!

YES, all signs do fail, "Famous Sayings" is a success. Twenty-two answers this time to date. More may come in late. As before we give the best one here in full and most of the others in summary:

—o—

The Winner—S. P. Stewart, Portage la Prairie, Manitoba. (Lest you misjudge us, Mr. Stewart's coincidental guess coming in a Canadian number, is not our fault.)

"Eat thou honey because it is good." Proverbs 24:13. This is one of the Proverbs of Solomon who wrote under Divine inspiration. Solomon was superior to all other Kings in happiness, riches and wisdom. This exhortation is just as timely today as when it was written ages ago. The full quotation is 'My son, Eat thou honey because it is good, and the honeycomb which is sweet to thy taste.'

"Honey was also eaten by our Lord, after his resurrection—Luke 24:42-43 'and they gave him a piece of broiled fish, and of an honey comb and he took and did eat before them.'

"The preservative qualities of honey were also known in ancient times, for Josephus records that the Jewish King, Aristobolus, whom Pompeys partisans destroyed by poison, lay buried in honey, till Anthony sent him to the royal cemetery in Judea. Bees must have been common in Palestine to justify the title given to it, 'A land flowing with milk and honey.'

"Milk and honey were among the chief dainties in the earlier times and butter and honey are mentioned among articles of food by Isaiah, 7:15; 'Butter and honey shall He eat, that He may refuse the evil and choose the good.' Also in Isaiah, 7:22, 'For butter and honey shall everyone eat that is left in the land.'

—o—

W. C. Greenleaf, Muir Michigan.

"When King Solomon first began to reign, feeling his weakness and ig-

norance, he asked God for an understanding heart to judge his people. And God said unto him, 'Because thou hast asked this thing and hast not asked for thy self long life, neither hast asked riches for thy self, nor hast asked the life of thine enemies, but has asked for thy self understanding to discern judgment, behold I have done according to thy words, so I have given thee a wise and understanding heart—and I have also given thee that which thou hast not asked, both riches and honor.'

"Early in King Solomon's reign he wrote about three thousand proverbs addressing them to his son Rehoboam. Among them was this Famous Saying and another one we should learn by heart, 'A good name is rather to be chosen than great riches and loving favor rather than silver and gold.'

"The word honey appears fifty-three times in the bible and the word honeycomb nine times."

—o—

Jay Smith, Vincennes, Indiana.

"Over in Arabia lived a swell looking girl who refused to let her name be known. She lived in a province called Sheba and her home was a little one-horse town, about like Hamilton, Illinois. One night she was trying to get Amos and Andy but reception was poor so the only station that came in clear was XOX Jerusalem. Levi had just finished a speech favoring curtailment of hog production when he mentioned how another Jew named Solomon had cleaned up \$80,000 in one day, speculating in oil stock. She decided to pay Solomon a visit and do a little prospecting for gold.

"Her chauffeur, Jehu, after consulting his road map, announced the distance as being nearly ninety miles. He got out their twin-six Camel Special, filled the radiator with three barrels of water and the long journey was begun.

"The speed was terrific and the speedometer at times registered 9½ miles per hour. The trip was uneventful except when one of the camels

switched his tail so hard he switched off his tail light. The lady from Sheba gave Jehu a calling for this but Jehu told her if she did not keep her trap shut, and stop her back seat driving, he would quit.

"They arrived at Solomon's the third day just in time for supper. Solomon wanted to make a hit with her thinking maybe he could add her to his collection so he set out a swell supper. She would not tell her name so Solomon called her "Honey" and when they sat down to the table he said, 'Eat Thou, Honey, because it is good.'

—o—

Chas. S. Engle, Fargo, North Dakota.

"King Solomon was the third king of Israel, ruling from 978 to 938 B. C. He became famous for his wisdom, magnificent palaces and splendid court. However, his great wisdom and wealth did not bring him the love and respect that the Hebrews had had for his father, King David.

"The wonderful temple of Solomon was built out of the materials gathered by David, for the purpose, and upon the site purchased by him. Although Solomon gave capable advice, he did not reign wisely. He had many idolatrous wives and caused his subjects to be burdened with heavy taxes. At the end of his reign the kingdom was divided.

"Solomon might also have advised the daughter in a similar manner, 'My daughter, cook thou with honey, because it is good for each member of thy household.' Had he done so, perhaps the American Honey Institute would not have had such great difficulty today."

—o—

Fred W. Lesser, Fayetteville, New York.

"Let us look at other passages in the Bible that pertain to honey. Honey is mentioned in the following verses:

Gen. 43:11, Ex. 3:8, Ex. 3:17, Ex. 13:5, Ex. 16:31, Ex. 33:3, Lev. 2:11, Lev. 20:44, Num. 13:27, Num. 14:8, Num. 16:13, Num. 16:14, Deut. 6:3, Deut. 8:8, Deut. 11:9, Deut.

26:15, Deut. 27:3, Deut. 31:20, Deut. 32:13, Jos. 5:6, Jud. 9:18, 1K. 14:3, 2K. 18:32, 1 Sam. 14:25; 1 Sam. 14:26, 1 Sam. 14:27, 1 Sam. 14:29, 1 Sam. 14:43, 2 Sam. 17:29, Jud. 14:8, Job 20:17, Ps. 19:10, Ps. 81:16, Ps. 119:103, Prov. 5:3, Prov. 16:24, Prov. 24:13, Prov. 25:16, Prov. 25:27, Prov. 27:7, Is. 7:15, Is. 7:22, Jer. 11:5, Jer. 41:8, Jer. 32:22, Ezek. 3:3, Ezek. 20:6, Ezek. 20:15, Ezek. 27:17, Mat. 3:4, Mark 1:6, Luke 24:42, Rev. 10:9, Rev. 10:10.

"If you don't read the Bible more than I do, it will be interesting to look them all up. Present day dieticians place the various sweets in the following order of their importance to health: 1—Sweet fruits. 2—Honey. 3—Sorghum. 4—Maple products. 5—Unrefined cane sugar. 6—Refined cane sugar.

"So we see that the sweets most consumed are the least desirable.

"If only the public knew the facts, I doubt if enough honey could be produced. I believe that the Beekeepers' Institute is our best means of educating the public. Let us all support it with our contributions so that it may 'spread the gospel.' "

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Mrs. Roy S. Weaver, Navasota, Texas.

"In Bible times, honey was considered one of the most strengthening foods. At one time when Saul was king of Israel and they were at war with the Philistines, Saul ordered that no man eat anything on a certain day. His own son, Jonathan, didn't hear the order and as they passed through a woods they saw 'much honey.' Jonathan ate a bite of it and was strengthened so that he won a great victory that day over the enemy.

"When John the Baptist was in the wilderness his food was locust and wild honey."

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Edw. W. Cleeves, Somerset, Pa.

"This proverb was first reported, as far as we know, about three thousand years ago. The whole quotation is, 'My son, eat thou honey because it is good, and the honeycomb, which is sweet to the taste so shall the knowledge of wisdom be unto thy soul, when thou hast found it, then there shall be a reward and thy expectation shall not be cut off.'

"Let's call attention to the fact that this quotation uses the well known value of honey to illustrate the deeper value of the knowledge of wisdom."

— o —

Ivan Whiting, Roscoe, Illinois.

"Solomon developed commerce, strengthened the defenses and built the Temple. He was adjudged the wisest of the Hebrews and is best known for his extraordinary power of discerning human motives and expressing himself in Proverbs. In them we find practical wisdom upon all the moral problems of life.

"Honey in Solomon's day was the choicest of sweets. How much more exquisite in taste and more abundant is honey today? Were Solomon here, how much more would he admonish

the sons of this generation to eat honey because it is good?

"But we can rejoice in the American Honey Institute, the Kellogg Company and the other agencies informing the people about our wonderful sweet. Let's all hail above all in its great wisdom and in its mission, the beekeepers' modern Solomon, The American Honey Institute."

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Wm. Hessler, Princeton, Illinois.

"It must have been a tremendous job for King Solomon to keep his 1000 wives and their children supplied with sweets! Modern movable frame hives and honey extractors were unheard of. There was no sugar, corn syrup or other inferior sweets.

"In Judges 14, verses 5-10, it is recorded that Samson, while on his way to see his girl friend, met a ferocious lion and killed it with his bare hands. On returning home later, he found a swarm of bees and some honey in the carcass of the dead lion. He ate of it and took some home for his father and mother and they ate of it but he didn't tell them where he got it. During his wedding feast, he used these facts for making a riddle and offered a prize for solving it."

— o —

Edward N. Marsh, Swain, N. Y.

"Flowers, both real and artificial, were presented to Solomon. When he was asked to tell which were the real flowers, he opened a window and allowed bees to enter. The real flowers were the only ones the bees would notice."

Harry Harberg, Halstad, Minnesota.

"In reading his history, Solomon showed himself no mean agronomist, as it says, that his retinue was well provided for and that their number was large, including all the live stock necessary for their transportation and consumption."

— o —

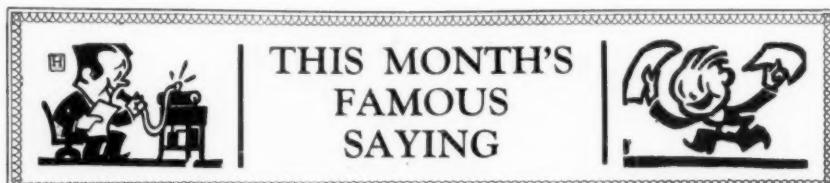
Raymond Bentley, Townville, Pa.

"While we use not more than three pounds of honey per capita, we consume 125 pounds of devitalized granulated sugar. So you see Solomon's advice is more valuable today than when it was given."

— o —

Replies were also received from Carl Kalthoff, Concordia, Missouri; Charles Boyd, Robinson, Ill.; C. T. McKnight, Shreveport, Louisiana; C. W. Duley, Smithland, Kentucky; N. W. Johnston, Des Moines, Iowa; Chas. L. Turner, Alhambra, California; C. F. Strahan, Linwood, Nebraska; Ben Burney, Jr., Crystal Springs, Miss.; J. S. Haratink, Lorain, Ohio; and Walter Thomas, Fondanet, Indiana.

In all fairness, it should be said that it was hard to decide between Mr. Stewart and Mr. Greenleaf of Muir, Michigan, for first place so we are granting both of them a book. We are sending something to each of the others. If this is as interesting to you as it is to the Editors, you will try your hand at the following "Famous Saying."



Ann Goeth Wild over test Hen goNe Baker Very Acute.

This way of making a sentence out of the letters of the Famous Saying is suggested by C. F. Strahan, Linwood, Nebraska. He did not suggest this month's saying but he did send another one which we may use later. Nobody suggested this one. We have been going over the old bee books and have found this particular saying given frequently.

Now don't give up. It ought to

take approximately two hours to work this out and then—to find who said it, that's the rub. See what you can do.

Remember about a 300 word story (one page of 8x11 letter size paper or two pages of ordinary notebook paper). The winner can choose any book listed on page 131. We will probably send something to everyone, so try your hand. Each capital begins a word. Go to it.

A New Wild Flower Book

"Pioneering with Wild Flowers" is the title of a new book which has recently reached the editorial desk. It is a very fine volume and every lover of flowers will find it most interesting. Nearly all the common wild flowers are illustrated with beautiful

photographs which make it easy to identify them.

Specific information is given for propagating many of the rare plants and a vast fund of facts concerning the long list of species desirable for cultivation. The book sells for \$2.00 and may be secured direct from the author, George D. Aitken, Putney, Vermont.

Sweetness from the Northern Plains

By W. D. Albright,
Supt. Dominion Experimental Substation,
Beaverlodge, Alberta.



Prairie Crocus, also known as pasque flower is an anemone, common to the prairies from Texas to the Peace River region of Western Canada. It is the first bloom to supply the bees with material for early brood rearing. This picture suggests but does not fully show the abundance of this flower in suitable soil. It soon disappears as the soil is turned for cultivation.

WASTING sweetness on the desert air" is a classic folly. Extracting sweetness from the desert flora is often a bee's duty—and sometimes rather up-hill work. That is to say, our common plant-producers of surplus nectar yield sparingly under semi-arid conditions of soil and climate. Even when the year's precipitation is of normal volume irregularity of occurrence may seriously interfere with nectar secretion at a critical juncture. In 1933, for example, just as the colonies were all set for vigorous assault on the luxuriant seed crop of sweet clover, a rainless August caused nectar production to peter out and the season at the Beaverlodge Sub-station went into tail spin with an average of about forty pounds extracted honey per colony. Something similar happened in 1932. What with spasms of summer drouth and two exceptionally long cold winters (to say nothing of the machinations of General Depression) beekeeping in the Peace River region of Northern Alberta has been "riding the bumps."

Packages have been least unprofitable of late. Two-pound and three-pound packages from Alabama have arrived with scarcely a handful of dead bees in any package and with only an occasional Royal casualty. With Professor Mitchener and others,

we favor earlier arrival than was once thought advisable. April advent has turned out well.

I personally believe cellar wintering in quadruple packing cases is better in some of our winters but no beekeeper ever knows what old Boreas may bring forth and when cold, snowy weather sets in early in November, continuing until the end of April, with conspicuous absence of the usual balmy chinook, the strain is severe and many dead bees accumulate on the floor boards. Under such circumstances top entrances might be much better and I think we should try them.

Mr. C. B. Gooderham, Dominion Apiarist writes under date of Feb. 1, "We were for a long time under the impression that package bees will not do nearly so well as over-wintered colonies east of the Prairie Provinces, and as a matter of fact, they do not in Old Ontario, but up in the North at Kapushasing the packages are giving excellent results. This of course is largely due to the fact that there is a heavy flow of nectar from the fireweed which comes later than alsike and white Dutch clover. It would appear that where the flow comes late, package bees will give an excellent account of themselves."

Bees are kept in the Peace River country by a growing number of

people and quite encouraging results have been at times obtained by those favorably situated along streams or adjacent to virgin hills. We do not encourage anyone to think he can "make a living from twenty colonies" as one inquirer mentioned, nor to go into commercial production at all but for him who really likes bees, counting as pleasure the work bestowed upon them the maintenance of a few hives is in order and may on the average prove quite profitable.

Our Cover Picture

Our cover picture this month is of the Canadian or Horseshoe Falls, at Niagara, the largest cataract in the world. It is situated seven miles from Buffalo, New York, between the cities of Niagara Falls, New York, and Niagara Falls, Canada.

Niagara River which connects Lake Erie with Lake Ontario is 33 miles long with a fall of 331 feet between lakes. It is divided by Goat Island into the American and Canadian Falls. Canadian Falls being the larger is 158 feet high with a curve of 3010 feet and the water near the center exceeds 20 feet.

The electric power generated from these falls is over 50,000 horse power, three-fourths being used by local manufacturers and the rest conveyed to Buffalo. The river and falls furnish some of the grandest scenery in the world which is best viewed from the Canadian side, where one can face both falls from one position. The sun shining on it by day gives it all the rainbow colors and the illuminations played upon it at night, adds to its glory and its beauty.

In the nearby region, in both the United States and Canada, are some of the Country's most successful beekeepers. This is in the famous buckwheat country where large apiaries harvest big crops of fall honey.

* * *

Added facts from the Convention and Publicity Department, Chamber of Commerce, Niagara Falls, New York.

"Nowhere in the world are so many scenic wonders grouped together as they are in Niagara Falls. The mighty thundering cataracts, the world's eighth wonder, have defied poet and artist alike for years.

"Here the missionaries fought the wilderness and the savage. It was from here that LaSalle came to build the Griffon, the first vessel to sail the upper lakes. The War of 1812 was centered about the region.

"Dainty Bridal Veil, between the American and the Horseshoe Falls, carries an air of fastidious grace, the romantic charm of a shimmering, fragile, lacey sheen. The great Horseshoe Falls is the symbol of the proud

(Please turn to page 121)



Queen and Package Code Signed

Just as we went to press we received a wire stating "PACKAGE CODE SIGNED AND IN EFFECT. ALL SHIPPERS HAVE BEEN SENT COPIES." This means that the code for queen and package bee shippers as formulated at the New Orleans meeting in December has run the gauntlet of special investigators in Washington to determine that it be ironclad against violations, and has been finally signed by the Secretary of Agriculture.

This removes any doubt from the minds of either buyer or shipper as to the possibility of the code perhaps being a dead letter by the time shipping season came. While there may be many who feel that prices are too high, or restrictions too severe as to fixed prices, now that the code is approved and has the backing of the federal authorities we must all abide by it.

The American Bee Journal has full confidence in the code committee of shippers and feels that all complaints and criticisms sent them will have due considerations.

Read the article on page 117 of this issue by Mr. Hambleton of the Bee Culture Laboratory. His remarks were written previous to the adoption of the code, but in anticipation of it. With his nearness to the administration, we can consider his statements as bearing decisive weight.

Hail to Canada

Canada has been much in the limelight as a honey producing area in recent years. In order to give our readers an opportunity to become better acquainted with the opportunities and problems of our neighbors to the north we have devoted the major portion of this number to conditions in that country. It is important that we understand the conditions under which other beekeepers produce their crops. The Canadians are good neighbors and delightful friends and we will do well to become better acquainted. Hundreds of Americans now spend the vacation months in Canada and find much to interest them. Canadian bee men likewise enjoy spending a winter vacation in our own delightful Southland. When we know each other better we will find that much of the rivalry so often found between nations will disappear.

Pollen Shortage

Frequent reports of a shortage of pollen are heard in early spring. This difficulty happens most often where Langstroth or other shallow hives are used. When the bees are storing their reserve of pollen it is placed just above the brood nest. In a shallow hive this usually puts it in the super and when the super is removed the pollen goes with it.

Without an abundant supply of pollen, brood rearing proceeds slowly and much spring dwindling can be traced to the removal of the reserve pollen supply with the surplus honey. With the deep combs such as the Jumbo and Modified Dadant hives the pollen is more likely to be left in the brood chamber and to be ready for use when needed. This accounts in part for the greater success on the part of inexperienced beekeepers with the large hives.

In the average mid-western location where willows and maples are common and where the dandelion is generally distributed pollen comes to the hives in abundance with the first warm spring days. In the old days much was written about the disposal of pollen clogged combs but with a better understanding the beekeeper learned that a big reserve of pollen in the hive was the best possible insurance for the success of his next year's crop. To get honey we must first raise bees, and to raise bees we must consume plenty of pollen as well as honey.

Age of Nurse Bees

There has been a tendency in some quarters to question the fact that only young bees serve as nurses. In this connection much interest attaches to reports of investigations of Doctor Rosch of Berlin and Doctor Morland of the Rothamsted Station in England, in the routine of a normal bee. By marking a number of emerging bees and watching them over a long period it has been possible to ascertain with reasonable accuracy what they do.

During the first three days after emergence they appear to do little except clean out the cells. From the third to sixth days they feed the old larvae on honey and pollen. About the sixth day they begin feeding the young larvae with royal jelly and continue until about the tenth day when they take their first flight. From the tenth to the eighteenth days they carry water, remove dead bees, clean the hive, build comb and take nectar and newly gathered pollen from the field bees for deposit in the cells. From the eighteenth to the twentieth days they act as guards in defence of the hive after which they go afield as foragers. From the twenty-first day to the end of life they remain as field bees. Particular work may not always begin on the exact day as above outlined as there is more or less overlapping but this is the general rule as observed by these well known workers.

Each bee under normal conditions passes through the six stages and performs all the duties down the line. Once it has passed through a certain class it does not return to it but continues the natural progression.

With these observations in mind we may assume that the general impression that young bees are nurse bees is correct and where exceptions prevail it is because of unusual conditions in the colony which interferes with the usual order.

Competitors of Beeswax

Several beekeepers have recently advocated a duty on beeswax coming from foreign countries. There seems to be a general impression that the foundation manufacturers control the price of beeswax. This is not true for no single industry can have much influence on the market price of this product.

Those advocating a tariff on beeswax overlook the fact that the principal competitor of beeswax in American markets is not foreign beeswax but wax from other sources. In 1925, the last year for which we happen to have official figures, only about three and a half million pounds of beeswax were imported while nearly twenty-four million pounds of other waxes came in.

This country is a large producer of waxes derived from oils. More than two hundred million pounds of paraffin wax have been sent abroad from this country in a single year.

To levy a tariff on beeswax and leave the other waxes free entrance would only serve to cause industrial users to substitute some other wax for beeswax and further reduce the demand. The tariff is a delicate instrument and unless it is used very wisely may do us more harm than good. So long as beeswax amounts to less than five per cent of the total wax used in industry we must consider the position of its competitors in the market before making any radical changes.

It should not be overlooked that more than twice as much Carnauba wax as beeswax is imported, and that other vegetable waxes of greater volume than beeswax are also imported. No restrictions should be placed on the movement of beeswax which are not also applied to its competitors or we may find our product at a disadvantage in industrial markets.

One Hive-body or Two?

In his article on feeders in this issue, John Mavie who recently came from England to America for a brief visit raises an interesting point concerning hives. The advantage of the single large brood chamber of the Modified Dadant type over two Langstroth hive bodies is too often overlooked. Of course it costs the beekeeper more to buy two Langstroth bodies than one of the larger kind and of course he must do a lot of extra work to secure the same result.

It is interesting to note that more and more of the large scale beemen are depending upon the big hives.

Shall the Producer Pack His Honey?

In his article discussing a code for honey producers in the February number of this magazine, Prof. R. H. Kelty stated that in his opinion carlot prices of honey would be up at least two cents a pound if the average producer would stop bottling his honey.

A little investigation provides much evidence to support Kelty's contention. It happens so often that the beekeeper sells his honey retail at wholesale prices, or little above, that the markets constantly feel this depressing influence. The beekeeper inquires what his crop will bring delivered in Chicago and then offers it at retail to his neighbors at a cent or two above that figure. He forgets that the packer must pay freight and handling charges, add the cost of containers and labels and that the retail price must also include the profit of the grocer and the distributor. Honey that brings five cents in carlots must retail at fifteen or twenty cents to cover these added expenses. If the beekeeper instead of selling to the packer at five cents, sells to his retail trade at six he establishes a retail figure so low that no packer can handle honey and make a profit.

Kelty is right. If beekeepers would sell only through the established channels of trade and stop depressing their own markets, honey prices would gradually rise. The competition between packers would raise the price to the producer as fast as demand would permit. The producer who packs his own honey to sell at retail should sell at usual retail prices in order to protect those who are engaged in packing and at the same time avoid depressing markets to his own disadvantage.

That Problem of Surplus

A few days ago a beekeeper expressed the opinion that he was safer to hold such honey as was not needed for immediate use than to convert it into money. In the days of our grandparents they felt secure only when they had a surplus of corn and wheat and hay, of canned fruit and beans. Our present day economists are able to think only in terms of cash.

What matter whether prices be high or low so long as they are equal? The price of a bushel of corn is of no concern to the farmer but the amount of goods which he can get in exchange. The fact is that our present difficulties are the result of debt and taxes. We have assumed obligations which we cannot pay and much of the talk about surplus is a smoke screen to hide the facts.

The writer well remembers his grandfather as one of the most independent of men, yet his cash income was small. He always had a small amount of money to loan to his neighbors when needed, but there was corn in the crib, honey on the shelf and canned fruit in the cellar. He was prepared to get along for a long period without cash income by living from his surplus.

Taxes are now so high, in many cases, as to confiscate the earnings of the farm. With debts to pay there is nothing left on which the owner may live. Taxes are not being reduced but greatly increased. The burden is shifted to some extent to give relief to one class at the expense of another. All the billions now being spent must be repaid through taxes in one form or another and everybody must pay. When you buy a gallon of gasoline half the price on an average is tax and tax is now hidden in the price of nearly everything we buy.

The beekeeper above mentioned is wise. If he doesn't need the money he is safer to hold his honey than to convert it into cash. The farmer with a big crib of corn is in similar position.

Bees and Poisons

Complaints of loss of bees from the application of poison to control insect pests are constantly increasing. Beekeepers have been compelled to abandon some good locations entirely and others are faced with the prospect of seeking new fields.

So serious has this problem become in many places that it offers a grave danger to the industry. Just what the beekeeper can do is a question. Unless he can secure the cooperation of the fruit grower his best and safest move is to find new pasture if he can do so without too great sacrifice. A recent court decision in the West awarding damages to the beekeeper for the loss of his bees is reassuring but this by no means insures similar settlement in all cases.

Control of insect pests is becoming increasingly difficult and in some localities the cost of control of codling moth in the apple orchards has exceeded the returns from the sale of the crop. It appears that some new methods of control must be found if fruit growing is to prosper. What those will be no one can foretell, but it is to be hoped that some way will be found to safeguard the fruit grower without injury to the beekeeper. After all, interests of beekeeper and fruit grower are mutual and neither can be seriously injured without detriment to the other.

The increased use of poison in dealing with so many crops is closing so many locations to the beekeeper that a careful study of the whole problem should be undertaken. Perhaps this subject is of sufficient importance to justify some of our research workers temporarily to lay aside the problems on which they are now working to see whether they can offer any relief to the harassed beekeeper. Potatoes, cotton, fruits and vegetables are now sprayed so generally that the total areas where poison danger exists is very large.

Wax from Flax

We are indebted to Doctor Fulmer, of Iowa State College, for calling our attention to an announcement that wax is now produced experimentally from flax in France, and has now reached a small production in Germany.

It is said that this flax wax corresponds very closely to beeswax. The "Chemist-Analyst" states that it has a slightly lower saponification value, a higher iodine value and a slightly higher melting point.

New sources of wax have been discovered with such frequency that there is no longer any surprise when one appears. Mineral waxes are produced in such immense volume that the total output of the bees is small in comparison. In fact beeswax is no longer available in sufficient quantity to supply more than a very small per cent of the demand for wax in industry.

What Is a Package of Bees Worth?

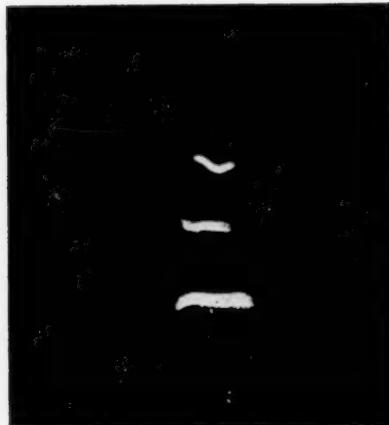
There is much discussion among the beekeepers as to whether the code prices of package bees are too high. In this connection our readers will be interested in the prices which are paid for live bees in the British Isles. The source of supply is continental Europe. Many packages come from France which is but a few hours distant.

Advertised prices as represented in our money are about \$7.00 a package. The three-pound package seems to be the one in common use there. The average paid by beekeepers in the United States and Canada is much below that figure.

Highways for Passenger Cars

When one sees the immense trucks now moving over our highways he cannot but wonder how long the roads will stand up under the heavy traffic. News items recently mentioned a twenty-ton truck, equipped with refrigeration, which carried a load of perishables from Los Angeles to New York. Eight days were spent on the road.

Considering their immense cost it seems unwise to submit our highways to possible destruction by traffic so heavy that it should be moved by railroads. Too, one has reason to be concerned for the safety of ordinary automobiles.



Insect Damage to Comb Honey

*By W. G. leMaistre,
Department of Apiculture,
Ontario Agricultural College.*



Figure 2.

Larvae taken from comb honey sections. When full grown the larvae are usually about 7mm. or 8mm. in length. These are nearly one-third enlarged.

RECENTLY, within the last years, a number of complaints have been made concerning insect damage that has been discovered in comb honey sections. Since the damage was a great deal more prevalent in the 1933 crop than it was previously, an investigation was begun.

The outline map (Figure 1) gives a rough idea of the distribution of the insect that has been discovered to date. It is altogether likely that a further survey will disclose other infested areas. So far the investigation has been confined to those districts of the province in which the insect was known to exist.

The only satisfactory way to determine the existence of this insect is by a careful examination of the sections by an experienced observer because in some cases, particularly when the honey is in a cool place, the damage is so slight as to pass unnoticed by a casual observer. Nevertheless, however slight the damage, a careful examination will generally locate a larva in each damaged section.

Some, who have observed the work of this insect, have laid the blame to the common wax moth (*Galleria mellonella* L.). The illustrations below (Figure 3) show the type of work that is being done by the insects under consideration.

The work of these larvae is not similar to that done by either the common or lesser wax moth. The work of these two latter is generally characterized by large tunnels with a good deal of silk, whereas the work of the former shows very small tunnels (not more than $1/16$ " in diameter), very little silk and often a fine white frass frequently in tubular or tunnel form along a cell wall. However it is unwise to draw conclusions at this stage. We have a number of larvae in an incubator and expect to be able to determine within the next two or three months the exact nature of the insect causing the damage. We hope then to be in a position to advocate some measure of control.

The Figure No. 4 shows what is considered quite typical of the work of this larva when working on a

comb that is in a dark place. It seems to have meandered about the surface of the comb eating the capping here and there. It has also established a tunnel at the top of the comb into which it retires. Many of the sections examined did not show the work of the larvae as plainly as any of the illustrations reproduced here. Quite often the only clue to the presence of the larvae was a small area of frass or perhaps the beginning of a tunnel near the edge of the section. In most cases there was only one larva in each section although two have fairly often been found and once nine larvae were taken out of one section.

Since these larvae prefer to work in the dark and since they are so small, they are frequently very hard to find. They often work in thickened cell walls near the wood of the section and even down the mid-rib of the honeycomb.

Very little serious thought has been given to the question of wax moths and other allied pests of the apiaries of Ontario. The reason for this being that the winters here are generally thought to be sufficiently severe to check the development of these pests.

It is generally understood that wax moths and other moths that are able to destroy the beekeepers' equipment are present in most districts of the province at some time of the year at least. However, as long as these moths are not present in large numbers, the amount of damage they do is not considered of any economic significance by the average apiarist.

There are a number of factors any one of which may be the limiting factor in the growth and development of insects. Temperatures, humidity, suitable food or hosts, quantity of available material on which to breed and develop (proximity of one bee-keeper to another), natural and artificial enemies, etc. All these factors are of vital importance to the development of the insect. Provide one deficiency amongst this group of factors and the development of the insect is



Figure 1.
Areas of known infestation to date shaded.

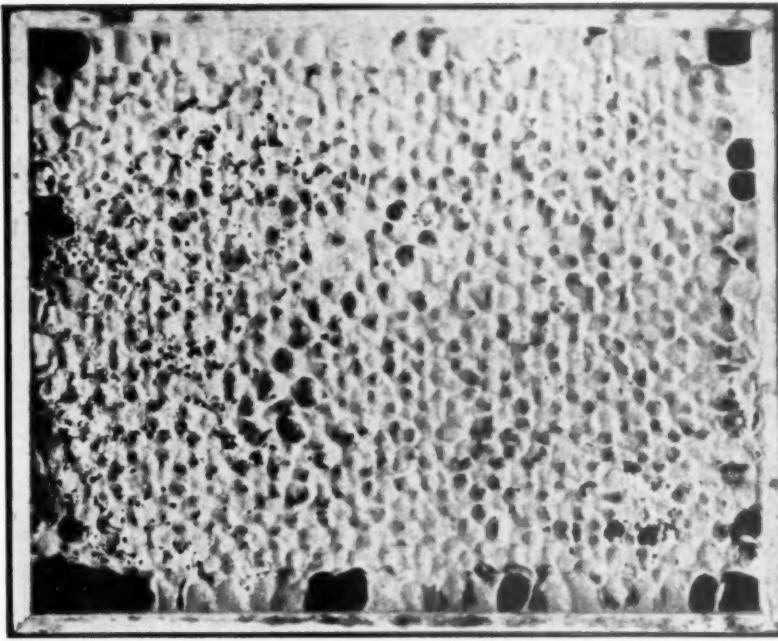


Figure 3.
Typical work of larva. No tunnels on the surface of the comb. The cell cappings have been eaten off here and there.

checked. As mentioned above, the general opinion is that the temperatures are ordinarily sufficiently low in Ontario to inhibit the development of such insects to the point where they are able to do much damage. On the other hand, a series of mild winters or other very favorable conditions will produce sufficient quantities of these insects that they suddenly become of genuine economic significance. A number of reports are on hand complaining of a considerable amount of damage that has been done in the past two years by the common wax moth (*Galleria mellonella* L.) and there is no doubt that Ontario has experienced comparatively mild weather during the past few winters. The appearance and development of our latest pest may be largely due to the same factors that have led to an increase in the common wax moth. At all events we are interested in annihilating it before it becomes very serious.

Post Office Department Permits Trial of Single Screen Cage

As a result of a request of the Bee Shippers' Federation, the Post Office Department has consented tentatively to approve the use of the single screen wire cage for sending package bees by mail in place of the double screen wire cage which has been required heretofore.

The following communication has been received from Mr. S. A. Cisler, General Superintendent, Division of Railway Mail Service, Office of Sec-

ond Assistant Postmaster General, Washington, D. C.:

"Further reference is made to your recent personal call relative to honey-bee containers.

"The Department is willing to give the single screen wire cage a trial and will tentatively approve its acceptance by postmasters. After a reasonable time we may be able to reach a final decision in the matter."

This means, therefore, that package bees can be sent through the mails

during the coming season in single screen wire cages. Other than the use of single wire screen, the cages are to be of the same design as the double wire screen cage.

It should be thoroughly understood that only tentative approval is being given at this time. If the Post Office Department finds that the single screen wire cage cannot be used successfully, orders will be issued to postmasters to accept only double screen wire cages. On the other hand, should the single screen cages be found acceptable, in all likelihood the postal regulations will be changed to permit the permanent use of this type of cage.

Jas. I. Hambleton,
Sr. Apiculturist.

Bee Shippers' Federation

The Board of Control of the Bee Shippers' Federation (5 members) has been elected. The members of the Board are as follows: W. E. Harrell, Hayneville, Alabama; J. E. Wing, Cottonwood, California; J. W. Newton, Rt. 2, Baton Rouge, Louisiana; and T. W. Burleson, Waxahachie, Texas. They represent the four states respectively. The fifth member is D. D. Stover of Tibbee Station, Mississippi, and he represents all other package bee and queen shippers of the United States outside of Alabama, California, Louisiana and Texas. There are several problems to come before the control committee of the Federation for decisions.

Now is the time for the bee and queen shippers to hold together for their mutual benefit. Most of the shippers have been interested in the agreement and have shown a fine at-

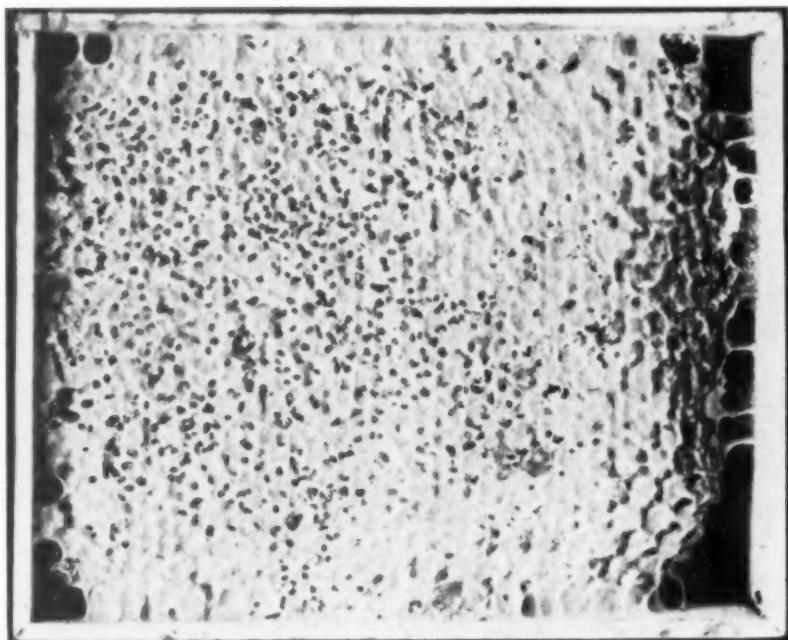


Figure 4.
Work of larva showing its tunnel at the top of the comb.

titude in working out the details. Some of the shippers, however, have grown restless in the extended length of time consumed in getting the agreement signed and as a result have begun quoting prices and booking orders below the agreed low prices. Such action of certain shippers has already caused considerable confusion among the other package bee and queen producers. It should be remembered that the trade agreement is with the Federal Government. The shippers who have made the quotations below the agreed prices should realize further that such action will cause them to be reported to the Secretary of Agriculture and their license will be revoked, which will result in their shipping privilege being withdrawn. This would prevent shipment of bees by the producer. Unless these shippers cancel their orders and stop quoting below trade agreement prices they are headed for very unfortunate circumstances for themselves and also for their business.

If any package bee or queen shipper desires a change in prices this fact should be reported in writing to the representative for his state or to the office of the Managing Director.

J. M. Robinson, Sec.-Treas.,
Bee Shippers Federation.

Notes from Saskatchewan

By R. M. Pugh,
Provincial Apiarist,
Saskatchewan.

Here in Saskatchewan we have enjoyed an unusually mild winter with only one cold spell, coming during the holiday season and continuing until mid-January. Since then we have had few really cold days and for the past two weeks the temperature has not been below zero. Water has been running on the streets on most days, a most unusual condition for us at this season. In spite of unseasonable weather bees seem to be wintering well both indoors and outside.

A short course in beekeeping was held in Regina, February 6 to 9. An unusually large number attended, over 100 being registered for the course. R. M. Pugh, Provincial Apiarist, was in charge, assisted by S. O. Hillerud, Provincial Apiarist for Alberta; T. H. Mack, Lumsden, Sask., and others.

"What will grasshoppers do next spring?" is the burning question in south and western Saskatchewan. A severe outbreak is predicted and, if this materializes, bees will have a hard time surviving in these districts. A cold, wet spring and an early summer is about the most effective control.

Great interest has been raised in Saskatchewan by the attempt of one or two shippers to evade the "Code." We are now reliably advised that this attempt has been nipped in the bud and these shippers must raise the

prices or refrain from shipping. Such prompt action on the part of the enforcement committee is to be commended as the buyer must have confidence in the protection afforded him by the code regulations.

The Saskatchewan Beekeepers' Association has just completed a very successful year. Starting with 371 members this was increased to 524 paid memberships by the close of the year and memberships for 1934 are now coming in.

The honey market here has been bare of Saskatchewan honey for some weeks and now outside supplies are practically exhausted. Buyers are trying to secure further stocks at from 1½c to 2c above fall prices. All supplies will be exhausted long before spring and the first honey on the market next fall should find a ready market at good prices.

Beekeepers in Saskatchewan have been reading of successful attempts to truck package bees from the South and this spring one of our larger producers proposes to drive south for a load. He will probably distribute the packages in the Regina, Govan and Guernsey districts. At present he plans to have the bees reach Saskatchewan about the 25th of April. The success of this experiment will be watched with much interest.

Beekeeping prospects for next summer, in eastern Saskatchewan, are just as bright as those in western Saskatchewan are dark. The east, with the exception of the southeast corner, is not expected to have any trouble with grasshoppers and, as clover went into winter in good shape and has been well covered with snow ever since, there should be little of it winter killed.

Minnesota Notes

By Dr. M. C. Tanquary,
University of Minnesota.

The number of beekeepers in Minnesota is estimated to be from 12,000 to 15,000 and the number of colonies about 100,000. The honey crop varies from year to year but probably ranges from 7,000,000 to 10,000,000 pounds.

From a beekeeping standpoint the state may be divided into three general sections according to the floral source for nectar which predominates in each section. The first includes the southern and particularly the southeastern part of the state where the greatest part of the honey produced is from the white Dutch clover. This is more prevalent in the southeastern part where this clover ordinarily grows in abundance. Because of the deficiency of rainfall during the past few years the crop from this source has been below normal. Alsike clover is grown in some parts of this section, particularly in the region of Janesville, where E. L. Hoffman did pioneer

work in inducing the farmers of his region to grow it. Many carloads of alsike seed are shipped out from that region each year. This forms one of the best examples known in which a beekeeper has definitely influenced the honey producing possibilities of his territory. Basswood was formerly found abundantly along the river valleys of this section, but only scattered stands of it are left now.

The second section includes the western third of the state from the Canadian border to the Iowa state line where sweet clover is the chief nectar source. During the terrific drouths of the last few years the honey crops from this source have been disappointing and a number of commercial beekeepers have been forced to move from one place to another in trying to find a location with a dependable flow. In the Red River Valley where enormous acreages of potatoes are grown, beekeepers have reported heavy losses due to arsenical poisoning when the crops were dusted or sprayed. Alfalfa is grown throughout this region and occasionally yields some nectar, but in general it is not considered as an important honey plant here.

The third great section is included in the large triangle which would be formed by drawing a line from a point on the Wisconsin state line about 50 or 60 miles north of St. Paul to the Canadian border a little west of Lake of the Woods. Alsike grows wild over the greater part of this territory and in some parts is grown extensively for seed. This makes good territory for beekeeping, but the section is more spotted than the other two, and within the limits mentioned there is much territory that is unsuited for beekeeping because of poor soil or because of the presence of timber. In parts of this territory there are frequently heavy flows from willow herb (fireweed) and from wild raspberry.

Naturally the lines between these three sections are irregular and not sharply drawn and the plants mentioned as characteristic of any one region (with the exception of fireweed) may occasionally be found abundant in the other two. Of the fall flowers, goldenrod and aster are sometimes abundant and yield heavily, particularly in the northeastern section. Comparatively little buckwheat is grown in Minnesota although once in a while a beekeeper reports getting a little buckwheat honey. In the southeastern part of the state in the lowlands along the streams, hearts-ease (smartweed) furnishes a good supply of nectar.

Minnesota has an efficient bee inspection service headed by Professor A. G. Ruggles, State Entomologist, but the funds available for that work are altogether inadequate for the needs.



Here and There in the Northeast

By Robert M. Mead,
Vermont.

WESTERN Vermont continues as stamping ground of some real commercial beekeepers. Having an underlying strata of limestone and blessed with broad valleys it lends itself to large scale work more readily than the eastern side of the state. Even over there it will be noted that the most successful beekeepers diversify their work somewhat. Several handle supplies for smaller beekeepers, others have farm or village interests that can be worked in along with beekeeping work.

The Connecticut River is somewhat to this section as the Mississippi is to the Central West. From its start in northern Vermont and New Hampshire until it flows into Long Island Sound, it is flanked on either side by fine farm lands or large villages and cities. Honey plants are plentiful along its banks, ranging from willow in the early spring through basswood and sweet clover to goldenrod and asters. Truly, our "Old Man River" of New England is useful in more ways than one.

Speaking of sweet clover growths along river banks reminds me to tell you folks that like to experiment by planting pasture for your bees, that a few handfuls of sweet clover scattered in the rich mud of a river bank or lake shore will grow and spread amounting to a thousand times as much as a hundred pounds of seed sown on more scanty soil. If there is a river or lake within flying distance of your bees try it.

Business picks up! Throughout New England there is an underlying tendency towards better times. I say underlying because much of the improvement is not visible yet to pessimistic persons. Just consider, however, that for a long time after the beginning of the depression we went downhill. Now, at the very least, we are holding our own. Isn't that an improvement?

Honey goes to market in New England the way I go to church. That is, once in a long while and without much apparent reason for going or not going. My own private excuse is that sermons, long ones, give me a headache and that with a good sick headache my religion approaches the vanishing point. But what about honey? There must be a headache in its make-up somewhere; or how else do you explain that thousands of chain groceries through this section, supplying the food needs of hundreds of thousands of people, feature it in

a decidedly mild manner only two or three times a year? And when they do, it is in 8-ounce jars at a price that makes it a luxury.

Sometimes when honey is featured in the grocery advertising for the week it cannot be seen in the store because it is tucked away under a counter somewhere. I argued with one chain store manager about this. His reply explains considerable. "Well, it's like this," he said "Honey does not sell as rapidly as a number of other packaged food products. As manager of this store I am expected by the people that hire me to make as large as possible gross sales for the week. I have to make a good showing to hold my job, so I feature the packages that sell readily in order that they may sell even more readily. There are so many of these that honey goes under the counter. Nothing against honey you understand, just business."

One man's food is another's poison. When this winter is over with its galloping subzero temperatures, southern package shippers will benefit by our loss by restocking our apiaries with package bees. I predict that the

winter loss for New England will be the most severe in years and that it will be followed by a fine summer honeyflow. Who actually knows? Perhaps this is a scheme of the Great Schemer to give southern shippers some much needed business.

Jumping from beekeeping to politics for a grand finale, I wish to mention that New Englanders in general are not yet so degenerated that they will follow blindly in any man's lead. Rugged individualism is a strong New England heritage that has as its fact, in face of modern theory, that in the success of the individual lies the success of the community. We believe it doubtful that the race of humanity can be raised to new heights by bringing us all down to a common level.

Another Bee Book

Charles E. Waterman of Mechanic Falls, Maine, is the author of a little book about bees recently issued from the press of the A. I. Root Company. It is not a text book but a collection of sketches in which the author comments upon numerous subjects of interest to a beekeeper. Titles of chapters which will give an idea of the contents are: All in a Clover Field, The Honey of Hymettus, Odd Honey Makers, The Hermit, Bombus, The Laurel Wreath, etc.

The title of the book is "Apiaitia" and it can be secured from the author.

Outdoor Wintering at Ottawa



TISSOT'S apiary at Ottawa winters outdoors in Dadant size, double-walled hives, well sheltered from wind and in sunny exposure. They do well, as this photo shows; colonies piled with supers evenly, a sight we like to see when the honeyflow is underway. For human comfort, they really

are too far above Mr. Tissot's head. The ladder may be needed to get the honey down. Somehow, it always seems comparatively easy to lift supers full of well sealed honey. There is so much to come that is worth thinking about that the supers seem lighter than they really are. Is that your experience?



About Those Package Queens

Floyd has given much time and study to the receiver's results from packages. Manitoba beekeepers have been saved considerable loss through his efforts.

By L. T. Floyd,
Provincial Apiarist,
Manitoba.

CUSTOMS reports credit Manitoba with the purchase of package bees to the value of \$35,000 in 1933. The problems connected with this line are always of interest to the majority of those who keep bees in Manitoba. We hear lots of complaints regarding the queens that either arrive dead or are superseded shortly afterward. Last season our attention was drawn to a very interesting point regarding those that arrived dead.

Early last season I met a Winnipeg man who ordered five hundred packages, these were timed to arrive in lots of fifty daily until all were delivered. I saw these shipments arrive at the express office and they appeared to be in very fine condition. I met this man on the street toward the end of the second week and commented on the splendid condition of his shipments. He replied: "Yes, they were very fine; but do you know that there were fifteen dead queens in that first shipment? I wired the shipper to rush me queens, and when I went to introduce them I found laying queens in nearly every case."

About the same time I was interested in a shipment of one hundred packages. These were timed to arrive in two lots, fifty on Tuesday and fifty on Friday in a certain week. Five extra queens were ordered to come in the second shipment. When the first lot arrived there were five dead queens, so on the arrival of the second lot the five were introduced without examination to the early arrivals, but on hiving the second lot two queens were also found dead in that lot. Next week when fresh queens arrived I went out to this yard with the operator and upon examining these marked hives found nice laying queens in each.

During the summer I have made some inquiry and I find that it is

Another one says, "We have some superseded queens and when this takes place we do not know how many queens may be in that hive. Undoubtedly some packages get extra queens in that way."

It can readily be understood that when a queen is taken by some of the methods described another trip in ten days would find the conditions ripe to supply more loose queens. Shippers reading these lines I am sure will say, "Oh, you are telling us. Come down here and show us how much better you can do." I do not want anyone to take that stand. The point I want to get across is this and it is to the receiver of package bees. When you find a queen and attendants dead in the queen cage in shipments of package bees, take a look for a queen among the bees. This is especially important when the queens in packages come in dry cages as you will be receiving all of your queens before many years have passed.

I have been watching carefully and with great interest these shipments in dry cages and believe the queens receive very earnest attention from the bees outside the cages. There is something decidedly wrong if that queen arrives dead. One of the greatest difficulties we have to deal with in this package bee business is the queen side of it and undoubtedly there are faults at both ends of the line. If we can discover methods of dealing with these difficulties it is to the advantage of the whole industry. Often we have heard it said that the queens should be introduced before shipment, this as I understand it is out of the question, although from the receiver's standpoint this would be the best way. Let us then, when we receive them thus by accident, give the shipper the credit.

A Place for June Packages

By L. T. Floyd,
Manitoba.

In the past two years a good deal of thought has been given to why and wherefore of the supersedure of many queens in package bees. The loss of crop in the colonies whose queens have been superseded or have been replaced by the beekeeper is considerable. About all the receiver of these goods can do at the time is to see that a new queen is introduced as soon as the first one begins to fail, but this is not enough to save the crop.

Our plan is to have a number of queens arrive the day before our visit to the bees and then carry these to the apiary and replace all queens that show signs of failing. If these colonies are marked it will be noticed later that the time lost is a serious matter even at that.

Well what can be done about it? If a few packages of bees are ordered

to arrive about June 10th and a quart or more shaken into these colonies it can be done without any trouble because at that time dandelions are in bloom and the bees will be readily accepted. The stimulus given the colony by this reinforcement is nothing short of marvelous.

I would have these packages accompanied by queens and for a hundred colony yard all started from packages I would advise an order of ten. If the operator has some strong overwintered colonies, combs of brood from these can be given to the weak colonies and the packages will not be needed but where the yard is entirely made up of packages the average crop will be greatly increased and the operator better satisfied if he reinforces these slack colonies. The queens which come with packages will all be needed for replacements.

There is also a place for June packages with the man who has a good cellar and gets his hives through the winter full of bees. This man will have all sorts of trouble with swarming if he leaves them to themselves and if he prefers to make increase he can order packages for early June delivery, and hive them on combs of hatching brood from the wintered colonies.

I know one man who had a strong wintered colony last spring. He had a package loss replaced about June 15th and I advised him to hive that package on three combs of brood near to the hatching point from the wintered colony. The result was a surplus of 125 pounds where the package unaided would have had a hard time to get enough for winter. What happened in this case was that the date was pushed back a full month by giving them the three combs of brood. The brood hatched fast enough to give the queen room to lay. The strength of the wintered colony was reduced sufficiently to make it behave.

If the shippers will be reasonable we can handle those June packages but the price certainly should not be much more than half the price of the April shipments. That is looking at it from this side of the fence. One of the troubles with our honey production work is that we are far too willing to follow the rules set up by certain great leaders that lived many years ago instead of doing more independent thinking for ourselves. Speaking particularly of the province in which I live spring comes on with such a rush and summer follows so quickly on its heels that we must be on our tiptoes every minute or the golden opportunity has passed.

The men interested in our dairy industry are continually talking about cutting out the boarders. The poultry men say do not keep the non-layers, they are only a bill of expense so

(Please turn to page 104)

Packages Should Arrive in April

Professor Mitchener has made case studies of package results for years at locations that cover the Province of Manitoba. All northern beekeepers have benefited.

By A. V. Mitchener,
Professor of Entomology,
University of Manitoba.

THE use of package bees in Manitoba as indicated by customs receipts at Winnipeg alone, has been increasing during the past five years. This has been influenced greatly by the downward course of the cost of package bees during that period of time. In addition, in 1933 the cost of transportation was at the revised rate for the first time throughout a whole shipping season. A very unsatisfactory feature of the 1933 season was the existing unfavorable rate of exchange. At present the prospects in this regard for 1934 are more encouraging. The following tabulation shows the packages received at Winnipeg during the last five years. In addition the percentage arriving at Winnipeg before May 1 and after April 30 for each of these years is indicated. In the right hand column is an approximation of the average price asked for two pounds of bees with an untested queen in lots of ten packages f.o.b. shipping point for each year. This approximate yearly price was calculated from averaged advertised prices asked by the leading package bee producers in the southern states.

Package Bees.

Year	No. of Pack- ages	Rec. before May 1	Rec. after April 30	Approx.	
				Average Adver. Price	Price
1929	2325	35%	65%	\$3.35	
1930	2749	29%	71%	2.85	
1931	3028	42%	58%	2.45	
1932	3848	47%	53%	2.15	
1933	8603	38%	62%	1.72	

It is evident that each year more and more packages have been used. This increase was particularly noticeable in 1933. There are many ports of entry in Manitoba in addition to Winnipeg although this point receives more packages than any other. This increase in the use of packages has



taken place in spite of the fact that the estimated number of colonies of bees in Manitoba has decreased during the last two or three years.

Both practice and theory indicate that packages of bees should reach Manitoba beekeepers by the time the earliest pollen is available. This earliest pollen is from hazel and crocus in certain favored areas but is mostly from various species of willow. This first pollen is available during the latter half of April under normal conditions. We advise beekeepers to order bees for April 15 delivery. As our nectar flow for surplus honey production begins about the beginning of the last week of June it is necessary for the beekeeper to secure his bees in April if packages are to build up a strong working force to take advantage of the beginning of the nectar flow. In dry seasons when the month of July is better than August, it is more necessary than ever to have the working force strong at the beginning of the season.

The data shown above indicate very clearly that either many of our beekeepers have not grasped the importance of obtaining early delivery of packages or else the southern shippers have disappointed many of them by shipping long after the date specified by the buyer for delivery. Personally, I am inclined to believe that both conditions have been responsible for such a high percentage of packages arriving at Winnipeg after April 30. The interests of both the buyer and the shipper of package bees are served best by early shipments. The buyer gets a bigger crop of honey and the shipper has a more satisfied customer. Each April package should be hived on three or four combs of honey saved from the crop of the previous year. Beginners who must start with combs of foundation

should order their bees for approximately May 1 delivery.

During the five year period 1929-1933 the average advertised price of packages dropped annually. For 1934 the price of packages probably will be substantially above that of 1933. Just what effect this will have upon purchases remains to be seen. Already interest is being revised in the topic of cellar and outdoor wintering of bees in this province.

Sweet Clover in Manitoba

By A. V. Mitchener,
University of Manitoba.

One of the most important factors contributing to the success of bee-keeping in Manitoba during the past ten years has been the annual increase in the acreage of land devoted to the growing of sweet clover. The following estimates of these acreages were made by the Department of Agriculture of this province:

Year	Acreage of Sweet Clover
1924	94,844 acres
1925	124,666 acres
1926	141,070 acres
1927	163,252 acres
1928	178,171 acres
1929	198,841 acres
1930	233,400 acres
1931	188,458 acres
1932	290,900 acres
1933	347,100 acres

It is to be hoped that the agricultural trend in the immediate future will be in the direction of larger and larger annual acreages devoted to this crop. Beekeepers should actively encourage the growing of sweet clover. In Manitoba our surplus honey crop is produced almost entirely during the months of July and August. The beginning of this flow corresponds with the appearance of the first bloom on sweet clover. If we could cause the flow to begin ten days earlier we would extend our producing season by just that period of time. Yellow sweet clover blooms earlier than the common white variety by at least a week. Now a new variety of dwarf white sweet clover has been developed by the University of Saskatchewan, Saskatoon, Saskatchewan, which blooms a few days earlier than the yellow variety. The more common use of these varieties would be of great advantage to beekeepers. Sweet clover grown for seed or for pasture is most valuable to the beekeeper. Where grown only for hay it is of relatively little use as it is cut before it comes into full bloom.

Those intending to grow sweet clover sometimes experience difficulty in obtaining good germination. Seeding practices vary in different localities and the successful local practice should be observed. In some localities in Manitoba sweet clover seed is mix-

ed with the grain and the two are sown at the same time and at the same depth in the soil. In other localities the seed must be sowed separately and only just below the surface of the soil. The tendency with our cheap seed is to sow twenty or more pounds per acre to obtain a good stand of young plants. A thick growth of plants produces a finer growth of stems. Heavy seedlings require large acreages of sweet clover to be grown for seed. The beekeeper who has a location near a seed producing area is fortunate.

A Place for June Packages

(Continued from page 103)

with our honey producers let us, too, cut out the boarders by making them producers. Our money is tied up in valuable equipment and unless every unit is made to produce we are not taking full advantage of our opportunities.

To get all that is coming to us two careful checks must be made, one when the bees come out of the cellar when packages should be ordered for every dead and weak colony, then at the beginning of June to reinforce all colonies and packages which have superseded their queens in April or May. If we do this it will cost a little more money but will be returned to us with generous interest added when we harvest the crop. June is a month when packages are available, both in the South, and in the states a little further north, and full advantage should be taken of this source of supply.

Water Important in Spring

By Frank Beach,
Idaho.



A good steady-working way to water bees.

In early spring after the cold winter, when the bees begin to raise brood and are flying about, they go to the watering troughs around pumps and wherever they can find water. In this desert country where we depend on irrigation, the water is not turned in the ditches until April. The distance to the river is too great for bees to cover; but they must have water, so they go to the farmers' troughs. The

wind blows many bees into the water where they chill and are unable to get out. The farmer brings his stock to the watering trough, but so many bees are there that the stock will not drink. What are we to do about it? The bees will roam in spite of all that can be done; but one can lessen the trouble and save many bees. In 1925 I put water in my home yard which contained 98 colonies. I wanted to know how much water the bees used. I have the following record.

March 26	87 lbs.
March 27	42 lbs.
March 27-30	135 lbs.
March 31	116 lbs.
April 1	20 lbs.
April 2	112½ lbs.
April 3	84 lbs.
April 4	84 lbs.

On warm days the consumption of water was greatest. One could tell the kind of day by the amount of water consumed.

Although watering the bees in the yard does not keep all of them from going to the neighbors for water it does help to keep many of them at home. When water is placed in sheltered locations the bees are able to get water when it would be impossible for them to fly any distance.

[We believe in watering the bees this way. We do it ourselves.—Ed.]

Caucasians in Nebraska

To the article by C. L. Corkins in the issue of September, 1933, you attach a note to the effect that the Italian bees are much better for the plain areas than the Caucasians. We have had from ten to twenty-five Caucasian colonies scattered among our two hundred and fifty stands for the past four years, and without exception the Caucasians have been from ten per cent to thirty per cent higher in production than the Italians. They swarm about as frequently as the Italians. We have proved to ourselves that they are the best here in this country, and we expect to introduce them into all our colonies next year.

Harold I. Perrin,
Nebraska.

British Columbia Exhibitors Capture 16 British Prizes

British Columbia honey exhibitors took sixteen out of nineteen awards offered at the Imperial Fruit Show, Bristol, England. This improves their fine record established yearly since 1931.

Two apple exhibitors, J. C. Clark, of Keremeos; and James Lowe, of Oyama, secured five first prizes in the Canadian Championship classes. Mr. Lowe, in addition, received honorable mention and one third in Empire apples.

H. G. Hodgson,
British Columbia.

Noah Williamson



THE death of Noah Williamson announced in the February issue was a shock to his many friends in the Middle West. Williamson was prominent in Iowa beekeeping circles and was president of the Iowa Beekeepers' Association for several years.

Death was caused by a fall from a truck while he was loading, which resulted in a fractured skull. The accident took place near his home at Bronson, Iowa, on January 27. Funeral was held January 29. Williamson was born in Indianola, Iowa, December 29, 1871. He had but recently passed his sixty-second birthday.

He was married to Miss Laura Lucher, of Cedar Rapids, Iowa, in 1899, who survives him.

Noah Williamson was one of the most extensive beekeepers in Iowa, having about a thousand colonies of bees. It is understood that Mrs. Williamson will continue the business with the assistance of Mr. Jensen who has worked with the Williamsons for several years.

Artichokes for Bees

The following letter comes to the editor's desk from Leslie Shaw of Eldorado Springs, Missouri. Mr. Shaw calls attention to a honey plant quite generally overlooked in our literature:

"I read much about the value of certain plants for bee pasture but not once have I noticed artichokes mentioned. Here in this district, southwest Missouri, they secrete much nectar when cultivated. Wild artichokes here produce but little honey. They fill in a gap that is much needed—a late honeyflow. They start blooming here the first of September and continue for about four weeks. They not only give a good honeyflow but produce a large crop of tubers for hog pasture. They stand dry weather well and do better under cultivation. I would like the opinion of others who have tried them."

The Jerusalem Artichoke (*Helianthus tuberosus*), is a variety of sunflower. It produces a large number of bright yellow flowers and blooms for an extended time. It is a native of the Middle West from Minnesota to Missouri and westward but has been introduced eastward through cultivation for the tubers.

It apparently yields nectar freely and where the plant is abundant should make a substantial addition to the fall honey crop. It is rather surprising that more has not been written about it in the bee magazines in view of its attraction for the bees.

F. C. P.

Another Method of Treating a Colony Infected By American Foulbrood

By A. H. W. Birch,
Apiarist, Central Experimental Farm,
Ottawa.

Seeing Mr. Ford's article entitled "Saving the Bees" in the January number of the American Bee Journal, I am constrained to tell our experience of a like nature at the Bee Division, Central Experimental Farm, Ottawa.

Early in June, our first case of disease appeared followed by others but all of a very mild nature. The first few cases were treated by fire, but later the following method was devised whereby we saved the bees with so far no sign of any recurrence of the disease.

When examining the colonies, which by the way, were mostly in two brood chambers, we came on an infected one. The upper chamber was replaced on the lower, and it was smoked heavily to drive most of the bees down from it into the lower. Immediately this was accomplished and before the bees could surge back up into it again, it was removed and a specially prepared super placed above. This super had four or five frames containing sheets of wire screening, in place of foundation, in it for the bees to cluster on, and over the top of the super itself a wire screen was fastened as in preparing bees for moving them. In a very short time the bees driven down were up in the prepared super which we will call the cage. Following this procedure, the cover of the hive was put on and the bees allowed to quiet down. The upper brood chamber combs, just removed, were next gone over and the few remaining bees brushed off—NOT SHAKEN—for this is the strong point of this treatment; there is no shaking to scatter nectar around. The combs were then removed to the cellar and later destroyed.

About 5 P. M. the next step was made. The cover of the hive was slid back to give an upward draught, the bees of the lower chamber were smoked or drummed up and when it was thought, by observation from above, that most of them were in the cage, a sheet of tin was slipped between the lower chamber and the

cage, thus imprisoning them in the cage. The cage was, then, carefully lifted with the imprisoned bees and set aside, the lower chamber removed, and the bottom board exchanged for a clean one, after which the cage was set on the clean bottom board and the sheet of tin gently withdrawn. Thus there was no disturbance, no flying about of bees, or entering of other hives by them. As in the upper chamber so in the lower one, there were very few bees left on the combs and these were brushed or flicked off the combs by one's fingers, but never shaken off. There is one point to note, however, which is that the sheet of tin when lifted, unless supported by a frame made to just pass over the hive, will sag and allow bees to escape, but if the frame is used not a single bee can get out. The frame when raised supports the projecting parts of the sheet of tin.

After transferring the bees from the lower chamber to the cage the entrance was left open until darkness set in by which time all the field bees were in. The entrance was then closed as in the moving of bees, and the imprisoned bees left for four days with nothing but sugar syrup, to get the disease out of their systems. They were, then, established on drawn combs and though a number of examinations were later made, no recurrence of the disease was found.

In regard to feeding, a honey pail cannot be used for this purpose, as the distance between the wire screening of the cage and the lid of the pail is too great for the bees to reach the syrup. What is required is a feeder like a gem jar, the cap of which comes in contact with the screening. It will be noted that when such a feeder is removed no bees can go with it, as the screening prevents them.

Should the weather be hot, it is advisable to remove the imprisoned bees to a cool place.

In brief this method of treating a colony consists in smoking the bees down, smoking them up, and imprisoning them for at least four days.



Another Good Year With Package Bees

By George N. Polhemus,
Iowa.

Results too good to be average but this picture shows that Polhemus did get the honey. Iowa State College records show it too. So read his story and remember, he made all conditions ideal.

THE year 1933 proved to be another very good one for Forest Glen Apiaries. Three-pound packages were used again, and these started out well on an abundance of good feed combs and stored pollen. The number of colonies was reduced from fifty to thirty on account of the limited time and storage room available.

The packages were installed in the hives after sunset of May 6, the hives having been carefully prepared and set out before time to receive the bees. Feed combs and those having considerable pollen stored in them were arranged at the outside to leave plenty of room for the queens to expand a uniform and compact brood nest.

By the end of the fourth week after installation most of the queens were nicely started in the second stories, and young bees were emerging in sufficient numbers to require the addition of storage space. Rapid building up of bee population and preservation of the usual wonderful package morale were accomplished by stimulative outdoor feeding, which was carried out during the second and third weeks. Unripe honey and water were used for this purpose, the feeding being discontinued as the honeyflow began.

Two distinct types of queens were noted at the beginning of brood nest inspection. Notes were made of all details pertaining to this peculiarity, and the check at the end of the season was very interesting. It showed that all supersedures and queen failures occurred in hives headed by one type of queen. Furthermore, these same colonies were inferior to the others in the storage of honey, ripening of stores and comb building. The leather colored Italian queens, which numbered nineteen, produced at the rate of about 450 pounds a colony. The minimum and maximum pounds in this group were 390 and 520. The other group of Italians numbered nine, and their average was about 215 pounds. The minimum and maximum

pounds in this group were 180 and 385. A few Caucasian queens were used, and in three colonies there was one supersedure. The average produced was 365 pounds.

Three nuclei were used as a queen reservoir. The Caucasian queen which superseded was one of these. The two Italian nuclei were absorbed by the weakest colonies in mid-season, but the Caucasian nucleus was carried through as a three-pound nucleus. By the end of the season it was quite apparent that more was expended in the nursing of this colony than it produced. The only redeeming feature of this item is that the help was always taken from the strongest colonies and apparently was not missed greatly by them. Incidentally, it seems advisable at this time to recommend a larger queen reservoir than was used in this apiary during the past season.

One of the most faithful helpers to enter the apiary last season was the hive record. It takes the guess-work out of beekeeping for me. Of course it is up to the apiarist to record his findings and to be as accurate and as systematic as he expects his records to be at the end of the year. It is impossible to keep worth while hive records if the bees are not worked thoroughly, systematically and carefully.

The weather last season left a good many things to be desired. The scorching heat of June and July together with all the drought rendered much of the pastureage useless, as all the shallow-rooted plants were barren of nectar for a considerable time. The small clovers undoubtedly suffered seriously and may not be up to par for several seasons. Even the deep-rooted sweet clover will probably be inferior next season owing to injury to the tender seedlings early last summer.

A summary of last season's work showed some rather interesting facts. Those hives which suffered supersedures produced four-ninths less on an average than the rest. The leather

colored Italian queens averaged half again as much as the others. The average for the whole apiary showed 416 pounds a colony; average net profit a colony, \$7.81; maximum and minimum production a colony ranged from 180 to 520 pounds; total estimated worth of all honey and wax produced, \$806.15; cost of production, \$571.79.

Personally, I am very much sold on package bees. After two good seasons during which they were depended on exclusively for the spring start, I am going to use them again next spring. They are the logical answer to replacement problems, and can certainly be used to very good advantage to strengthen weak colonies. I will vouch for their performance in establishing new apiaries, and I never hope to see any better response to manipulation than has been seen in my apiary the two years just past.

I do not wish to be misunderstood on the above paragraph. I have a location second to none for my bees to work on. I have enough of practical experience to get by fairly well with planning and manipulations, and I like to work with bees. Success with package bees or any other bees must be attained by carefully planning a successful program and diligently following it through to a logical conclusion. In other words, "Beekeepers are made, not born," and the fellow who expects the bees to do all the work is in for the worst kind of a jolt.

The judicial use of a few packages each year should prove to be a good investment in any apiary. There is just as much reason for keeping bees bred to conform to the most useful types as for cattle or hogs or any other livestock. Furthermore it is logically the job of the commercial breeder of bees to furnish the best it is possible to get, and do it the most economically. This should not mean operation without profit for anyone, and I sincerely hope that prices on all commodities pertaining to beekeeping will undergo an equitable adjustment in the near future.

Wisconsin Occupational Tax on Bees

The last Wisconsin Legislature included in one of the tax bills an item known as an "Occupational Tax on Bees." The Legislature provided that the tax be collected the same as on personal property, and that a certain amount be deducted by any municipality administering the law. Twenty per cent of the balance is then given to the town, city or village in which the bees are kept, and the balance is turned over to the general state fund.

It would be fine if this tax would go directly into an apiary inspection fund, but no such arrangement has been made, and the appropriations for apiary inspection still have to be made through the introduction of a bill into the Legislature.

Many of our beekeepers are distressed about this new tax, because it calls for 25c on the first colony and 10c per colony on the remainder. In some respects this law is not a bad one, because it provides that the names of all beekeepers shall be turned in by the assessor and recorded in a separate book with the total number of hives and equipment owned by each beekeeper. These records are to be open to inspection at all reasonable hours and the recording clerk is to furnish a list of the names and addresses of the beekeepers to the Department of Agriculture when requested to do so. This should provide better organization among beekeepers and if properly taken care of, will give a very definite census of the beekeepers and the number of colonies of bees in Wisconsin.

H. F. Wilson,
Wisconsin.

Pollination of Alfalfa

By A. Wm. Bowman,
Saskatchewan.

I have seen it stated several times that in the absence of insects alfalfa will quite satisfactorily pollinate itself. That may be so in some places but the peculiar weather conditions during the last two summers have shown me that bees mean the difference between profit and loss to the grower of alfalfa seed, here at any rate.

My bees are located in a patch of pedigree alfalfa and I waste a lot of time watching them—at least many practical people would call it wasted time. Under our conditions alfalfa is not attractive to honeybees. Whether the nectar is scanty or else is beyond their reach I have not yet found out, but it is freely visited by bumblebees.

Probably due to a mild winter there were very large numbers of bumblebees and wasps here in the spring of 1931. In the bee yard they seemed to outnumber the honeybees

on the dandelions. We had a terribly dry spring; the bees had to be fed continuously up to the honeyflow at the end of July, and it was obvious that the bumblebees and wasps were starving. Large numbers of both tried to force their way into the hives and in front of the entrances there were dozens of dead bumblebees, wasps and beetles. On opening a hive it was quite a common occurrence to find a big, fuzzy bee on a comb. Clusters of dead wasps were to be found in the trees. During the latter part of the summer and fall it was a rare thing to see a bumblebee or a wasp, but a few evidently survived because there was a light scattering of them this spring, however, not one per cent of the normal number. The large *Bombus Americana* seems to have entirely disappeared.

Owing to the drought in 1931 which spoiled the sweet clover crop the honeybees worked alfalfa freely; in fact, the blossoms seemed to have dozens of visitors, and we had the heaviest crop of seed that I have ever seen. But last year with the clover yielding well during alfalfa bloom the honeybees ignored the alfalfa entirely. There were practically no bumblebees, and the alfalfa seed crop was not worth harvesting and was fed for hay.

Is it just a coincidence, or are the bees more necessary to alfalfa than is generally supposed?

[It seems to be generally recognized that the seed crop from alfalfa will be light in the absence of insects. We have noticed that good crops of seed usually follow when the honeybee works freely on alfalfa.—Ed.]

Top Entrances in Canada



Top entrance at left, usual bottom entrance at right; one for winter, one for summer.

For us beekeepers in Canada the use of top entrances in wintering bees has proved very satisfactory. The colonies appear to come through the winter with just about as many bees

as they had in the fall when they were packed. Last season there was not more than one pound of dead bees to the colony and, very important, no queens were lost. As rear as I could estimate there were six to eight pounds of bees in each colony in April.

One of the largest colonies I ever had was given extra protection of tar paper; in fact, it was so well protected that I feared I had made a mistake because the bees did not come out for a cleansing flight on sunny days through the winter until the latter part of March. The colony was not opened until April 22, but on that day it was found in splendid condition. It had about ten frames of Jumbo size covered with bees. It was headed by one of Stover's queens, and in May she packed those combs with brood.

H. J. W. Lipsett,
Alberta.

The Smoke Method of Introduction

In the August number a question is asked about the smoke method of introducing queens. I think it has passed out of the picture because it was tried at times when the beekeeper had queens to introduce regardless of weather or honeyflow conditions.

I have used it many times and still do if there is a heavy honeyflow. I generally hunt out the old queen and rub her body fluids on the new queen, immediately running the latter in at the entrance with a good puff of smoke. I have had as high as 23 out of 25 accepted in this way.

However, I would not think of trying it unless there was a good flow. Where queens are ordered by mail, however, the beekeeper does not always have them on hand when conditions are right. However, when he raises his own queens, I believe, if conditions are right, he can get many accepted by the smoke method.

Harold I. Perrin,
Nebraska.

New Disease Bulletin

"The Treatment of American Foulbrood" is the title of a new bulletin recently issued from the U. S. Department of Agriculture. It is by James L. Hambleton, in charge of the Bee Culture Laboratory.

The treatment recommended is to kill the bees and burn the entire contents of the hive with the least possible delay. The bulletin advises against the shaking treatment or the disinfection of combs. Copies may be had from the Superintendent of Documents, Washington, D. C., for five cents each.



Fig. 1. Shelf for supporting a super of honey to be uncapped.

NUMEROUS appliances have been devised which are totally useless in the hands of the majority, but occasionally one is noticed which may be used to advantage. No doubt some of the following appliances are well known and possibly discarded as useless by many.

The first device is a small shelf or stand capable of supporting a full super of honey ready to be uncapped. A shelf may be built on the end of an uncapping tank or may consist of a small separate table suitably located near the uncapping knife or machine. As illustrated by the accompanying photograph, Figure 1, the shelf is made of fairly heavy band iron which supports a flat wooden area or table about two inches in depth which fits comfortably inside a super. When a super of honey is placed on the shelf the super itself rests on the band iron, while the wooden area of the shelf which fits inside the super pushes the combs up from below. A slight pressure exerted on the walls of the super breaks the wax and propolis thereby freeing all the combs from the super in one operation. This device eliminates the prying of individual combs from the super and leaves them readily available for uncapping.

A simpler method would be to build a small, raised area, about two inches high, which would just fit inside of the super on an ordinary table or work bench. The writer first noticed this helpful appliance in the honey house of Mr. H. D. McIntyre, formerly of Durham, Ontario, but is not certain whether or not Mr. McIntyre was the first to devise it.

A moving screen, as shown by Figure 2, resembles a telescope lid covered with ordinary fly screen. A light wooden cover to protect the screen and provide sufficient ventilation for the bees is built about one inch above the screen. This cover is made of one-half inch material and is supported in the center and on both ends by three one-inch square pieces extending across the lid. This lid, which protects the screen, is strong enough to hold the weight of several colonies.

When moving an apiary the entrance of each colony is closed and the screened moving lid is placed on the colony as a cover. The colonies may then be piled one on top of another on the truck to any reasonable height without fear of tearing or loosening the screen or smothering the bees. The moving screen eliminates the necessity of placing two-by-

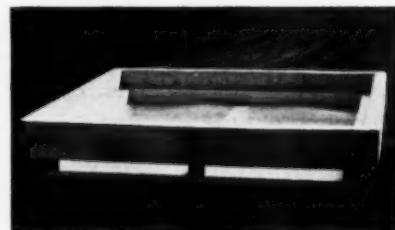


Fig. 2. Moving screen.

fours or other supporting material between each layer of colonies to provide ventilation. Occasionally such supports become loose and tear the screen thereby liberating the bees. Considerable time and expense is also required in fastening the screen to the top of the colonies and usually the screens are so badly damaged

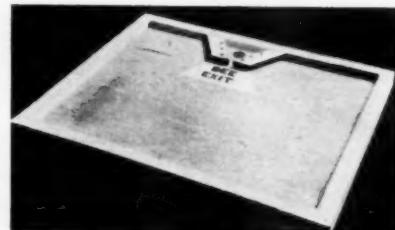


Fig. 3. Bee escape board.

that they are rendered unfit for further use.

It is only necessary to build enough screens to handle one truck load of bees. They may be used over and over again and if well built should last for several years.

To avoid closing the entrance and fastening the bottom board to the brood chamber, moving screens placed on the bottom of the colony as well as the top, would still simplify the

Beekeeping Appliances Being Used in Ontario

By E. J. Dyce,
Provincial Apiarist,
Ontario.

Beekeeping devices may help or hamper management. When they help, as these do, they contribute to that cut in operating costs which present prices demand.

work of moving. These moving screens should be of value to beekeepers moving colonies to and from orchards for pollination purposes. The operation would consist merely of removing the floor board and lid and placing a moving screen below and above the colony.

Figure 3 shows a solid escape board with a hole bored in it one inch in diameter. Two pieces of wood three-eighths of an inch in depth by one inch wide and three and one-quarter inches long, cut as illustrated and covered with wire, acts as a tunnel, leading to the exit. The size of the exit itself is about three-eighths of an inch square.

Most beekeepers prefer the greater portion of the board holding the escape to consist of wire, preferably two thicknesses of wire, to avoid feeding. This will reduce to a minimum the chances of bees suffocating in the supers should the escape itself become stopped with dead bees. During the last annual convention of the Ontario Beekeepers' Association, Mr. George Neil, of Tara, demonstrated the moving screen and bee escape.

Should you at any time be near Jarvis, Ontario, I can highly recommend your visiting the Hodgson Brothers' honey house. They are very successful commercial beekeepers and have contributed many helpful appliances to the beekeeping industry. They are not only born mechanics but have the rare ability of keeping their one thousand colonies and honey house in first-class order with minimum effort.

The accompanying photograph, Figure 4, is taken inside their honey house. The extractor is on the left and the two uncapping machines are on the right. Both of these machines were invented and patented by the Hodgson Brothers and have been manufactured and sold by the Ruddy Manufacturing Company, of Brantford.

The extractor consists of a large double reel in which eight supers holding twelve frames each are fastened. The ninety-six combs are extracted in about fifteen minutes. It

has an advantage over the simplicity type of extractor in that a comb is seldom broken. Before the extractor is put into operation a lid, hinged to the back of the extractor, is dropped down over the reel. When the reel turns, the honey is thrown out between the top bars of the combs against the base and lid of the extractor. The reel may be constructed to hold any type of equipment and has given excellent results. They are exceptionally well built and should last a lifetime.

The Hodgson uncapping machine is another unique invention. The comb fits a rack or holder, which is lowered to pass between two series of revolving saws. Both sides of the comb are uncapped in one operation. The rack or frame holding the comb is balanced so that little effort is required to lower and raise it. Two men can uncaps and extract twenty thousand pounds of honey each day with the above equipment, without any difficulty. Is this not a record?

Photograph, Figure 5, shows another handy attachment used by the Hodgson Brothers. It consists of an ordinary piece of pipe threaded on to a gate of a honey tank. The pipe is made smooth with fine sand paper and greatly facilitates opening and closing the gate. When one figures it is necessary to open and close a honey gate four hundred times to empty a tank holding two thousand pounds into five-pound pails, it should pay to have this convenience. A few drops of hot water on the hinges and sliding surface of the gate, to dissolve any dried viscous honey, materially assists in the opening and closing operation.

Death of Arthur Sturges

The many American admirers of Arthur Sturges, well known English beekeeper, will be shocked to hear of his death. The following notice is taken from the February issue of Bee Craft:

"The sad news of the death of Mr. Sturges will come as a great shock to his many friends. He died on January 3rd from heart failure—the end of about two months' bad health, which started with influenza and was followed by complications which undermined his constitution. A fatal ending was at no time anticipated until about a week before the end.

"Arthur Manning Sturges was the son of the Rev. T. W. Sturges, of Bridge Northam, in Oxfordshire, and was born in 1879. He took a science course at Zurich, obtained his B.Sc. at Manchester, and held a responsible post in Brunner, Mond's, for about twenty years. It was while employed there that he was first attracted to beekeeping, and this interesting hobby took such a hold of him that he later decided to go in for it on com-

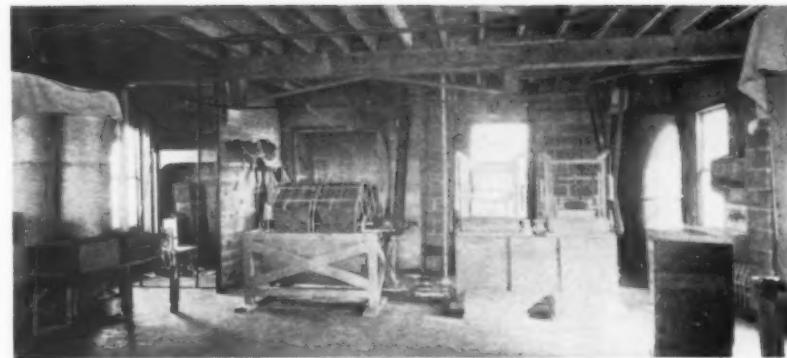


Fig. 4. Inside Hodgson honey house showing big radial and two power uncapping machines.

mercial lines. It was this decision that brought him south in 1925 to live—alas for so few years—at East Dean, Sussex. There he labored for eight years at the work he loved and had



Fig. 5. Pipe, threaded on gate, to aid in opening and closing.

built up an apiary of which he was justly proud. This coming year was to have seen his long-cherished hopes come to their full fruition, for he had planned to turn out at least 150 per cent more queens than last year and to sell them at a lower cost.

"He was a man of exceptional ability with a wide knowledge of many subjects. His conversations were always informative and a close friend of his told the writer that he never met him without learning something new. Among his brother beekeepers his outstanding ability and knowledge were recognized, and his books, "Practical Beekeeping" and "Swarm Control," were well known to all. He was a pioneer, an investigator, and an experimentalist. His reputation was world-wide, and all famous beekeepers from other lands made a point of visiting the East Dean Apiaries."

A Living from the Land

McGraw-Hill Book Company of New York has recently issued a little book, entitled "A Living from the Land." The author is William B. Durkee, Secretary of Agriculture of New Jersey. The book is designed to aid those who are leaving the city in search of a living in the country. Chapters deal with such subjects as, Getting Established in the Country, Making the Soil Produce Crops, Food from the Garden, The Family Milk Supply, and Marketing Farm Products.

The volume is intended to answer the questions which will be presented to one moving to the country without previous experience and to enable him to avoid expensive mistakes. The price is \$1.50 and the book can be secured direct from the publishers.

British Columbia Honey for 1933

According to W. A. Finlay, inspector of apriaries, British Columbia honey output for 1933 was 1,164,350 pounds as compared with 1,007,200 pounds in 1932. The highest average per colony yield was in the Okanagan, Shuswap and Thompson River areas—an average of seventy-seven pounds per colony. The Kootenay district averaged 69.2 pounds per colony. The Lower Fraser Valley was second to Okanagan. From all districts included in the report an average per colony in the province of 51.3 pounds was obtained.

F. H. Fullerton,
British Columbia.

Oh, Boy!

E. S. Miller, of Valparaiso, Indiana, in the Indiana "Beekeepers' Letter" comments on the proposed code for honey producers. "I understand fines and imprisonments are prescribed in some industries for those who sell below cost. It will be interesting to observe the result if applied to beekeepers who undersell."—Again we say, Oh, Boy!



Swarming in Comb Honey Production

By W. A. Rowland,
Ontario.



HERE, as no doubt in other parts of the continent, the greatest problem in the production of comb honey is the swarming. In past years every method advocated for the prevention of swarming has been carefully studied and with or without success has been applied to our local conditions. Each season special colonies are set aside for the working out of this problem in one way or another in the hope that finally we shall arrive at some plan which, if not perfect, will at least be superior to all others. Such a plan should have for its chief objective a maximum crop result coupled with a minimum of labor, making it available to the commercial producers. It should have a fairly high percentage of effectiveness.

In this district a white honeyflow commences fairly early, about June 20. It is very rapid but of short duration. Some years it lasts three weeks; others, four. Buckwheat rarely yields anything here in any year, so that the flow from clover and alfalfa is all we can depend on. During such a short flow the swarming fever is intense through almost one hundred per cent of the colonies. Every colony in the yard can be dequeened, yet for days afterward sometimes two or more will swarm, though queenless. Two or more of these swarms will unite, nor is each particular to which hive it returns. Sometimes several swarms unite and return to a single colony making this one extra strong at the expense of others. That is a fair picture of our swarming difficulties.

A few seasons ago we had been successful in holding a colony at work until the middle or near the close of the flow by dequeening and cutting out all the cells but the finest one which was left to requeen the colony. It worked well in this instance. That practice is, I think, advocated in many of the instruction books on beekeeping. Four colonies were treated in this way last season but at the beginning instead of the middle or latter part of the flow.

From the standpoint of crop production the results were extremely disappointing. The system was the poorest ever tried. Not one of the four produced half an average crop which, with us, runs between 80 and 100 sections a colony. Considerable care and labor were involved in selecting the best queen-cell. All the bees had to be brushed away and the comb held between the operator and the sun to detect hidden cells. In spite of this, evidence showed later on that hidden cells either existed already or were immediately built with the obvious result: the colony swarmed with the first virgin queen. In two others the colonies swarmed taking with them the young queen. This trial only served to confirm what to use is a fixed rule—never tolerate any plan which allows a queen to be raised and mated from a producing colony during a honeyflow.

All our experience seems to be leading us in one direction. The best method for us will be to keep the colonies in double brood chambers all through the year except during the honeyflow when a separation takes place. One chamber then works as the producing colony; the other raises the new queen. Both are reunited at the end of the honeyflow in preparation for the following year.

Dealers in Bee Supplies, Package Bees, Nuclei, and Queens

For several years past the Bee Culture Laboratory, U. S. Department of Agriculture, Washington, D. C., has compiled a list of dealers in bee supplies, package bees, nuclei and queens. This list is used in replying to correspondents who wish to purchase bees, supplies, etc.

The list is now being revised and those who desire to be listed again this year or who wish to be entered for the first time are requested to

send their names and addresses together with information relative to the commodity such as race of bees, packages, nuclei, bee supplies, etc., to the above address. The list will be made up March 26.

James I. Hambleton,
Sr. Apiculturist.

Leaf-Cutter Bees

My brother and I noticed that a number of bees were cutting large pieces of leaves from wild cherry and carrying them away. Some of the pieces were so large that they could hardly fly away with them. The bees would alight on a leaf and cut a round or nearly round section starting at the edge. I tried to follow them to see what they wanted with those leaves. Two weeks later I saw the same thing only they were cutting peach leaves. Did you ever hear of bees acting that way? C. R. J.

* * *

The bees you saw were not honeybees but leaf-cutter bees. They do not live in colonies as do honeybees. The mother leaf-cutter clears a cavity in some hollow stem as the elderberry bush. There she places a little ball of pollen moistened with honey and lays an egg. She uses the leaf to make a plug above the nest. After the leaf is in place she brings more pollen and lays another egg and then brings another leaf for another plug. Sometimes as many as a half dozen will thus be placed one above another. There must be some great scrambling to get out when the young bees reach maturity. The one at the top should get out easily enough but the one at the bottom must need some patience to find his way out or wait for all the others to clear the way.

The bees build their nests in a hollow stem and then put in the plugs in very much the same way that we loaded the old-fashioned muzzle loading guns with wads rammed down above the powder and shot.

F. C. P.

Beekeeping Along the Assiniboine

By R. D. Nicholson,
Manitoba.



Nicholson's Robinwood Apiary,
along the Assiniboine.

HERE in the Assiniboine Valley, in the vicinity of Portage la Prairie, we have a considerable bee-keeping industry. The early pioneers of our community operated several apiaries to supply the local demand for honey. They worked on the "let alone" system, allowing the bees to swarm freely; and they harvested their honey crops chiefly from the swarms.

It was not until L. T. Floyd was appointed Provincial Apiarist in the early twenties that the possibilities of honey production in this area were realized. Floyd introduced modern methods through short courses at the Manitoba Agricultural College which were put into practice by students in their respective districts. Many men secured their first knowledge of bee-keeping from Floyd's articles in the farm papers which were so instructive that a beginner soon became an enthusiast, especially as honey was then retailing at twenty cents a pound. At this price expansion was rapid, but when honey dropped to fifteen cents a pound many men discontinued to keep bees claiming there was no profit to be made. Those who stayed in the business saw prices drop a cent or two every year, but the extensive growing of sweet clover during this period saved the situation; for, while prices dropped to half, yields in sweet clover areas were doubled. Then came the depression which seems to be taking steady toll of the careless and indifferent bee-keepers. Those who enjoy working with their bees and consider this industry their life work have continued to increase the number of their colonies and have cooperated with their fellow beekeepers toward more efficient methods of production. Local associations have been formed through which containers are ordered in carload lots. Packages are purchased through our associations, and honey is marketed by the carload. This cooperation, together with the firmness in honey prices the last two seasons, has given the beekeepers confidence in the future of beekeeping.

The Portage la Prairie district bordering the Assiniboine River is well adapted to beekeeping. Along the streams the first pollen comes

from the long catkins of the alder, which trees are almost always in bloom before the pussy willows are out. We usually get a severe frost which deprives indoor-wintered colonies of this source, as hives are seldom removed from cellars till the willows bloom by which time the weather is more settled and less dangerous to unprotected hives. But for colonies in packed cases this alder provides a valuable stimulant to brood rearing. Following the pussy willows we have cottonwood, wild fruit bloom consisting of saskatoon, wild plum, chokecherry, sand cherry and Manitoba maple, all of which contribute pollen and some honey to keep the bees going. We are usually sure of a heavy crop of dandelions. It provides a valuable source of nectar upon which strong colonies are built up for the main honeyflow from sweet clover in July. Between these two flows, usually for a period of two weeks, there is very little nectar to be gathered from any source. During this time the colonies must be watched for indications of swarming.

The careful beekeeper makes weekly examinations and provides ample space for the expansion of the colony—not for storage, but for plenty of clustering space for the thousands of workers hatching daily. He provides for ventilation and shade; and he requeens, early in June, colonies headed by old queens which have begun their third season, or any which show signs of failing. An acreage of alsike clover would put a damper on swarming during this period even if weather conditions were favorable to swarming. For beekeepers along the Assiniboine River there is in some seasons a splendid flow of basswood honey which, when blended with sweet clover honey, gives a delightful flavor.

Increase and replacement of winter losses are made with package bees. However, of late, with the drop in the price of honey and the increase in package prices through N.R.A. regulations, greater interest is being taken in wintering bees. This brings up the question as to which race of bees meets our requirements most satisfactorily. My experience covers a period of ten years with Carniolans and makes me a staunch advocate for that race for the particular conditions

which prevail in Manitoba. I feel sure there are great opportunities for reliable queen breeders and package shippers located where they can keep the bees pure to develop a large trade in Carniolans to supply the northern states and Canada, especially the western provinces. Fortunately my first Carniolans were pure, and their performance was so satisfactory that I was "sold" on them from the start.

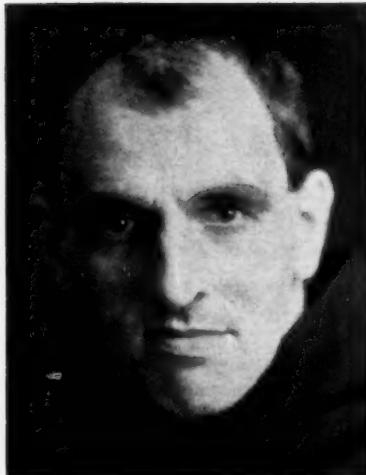
Certain it is that the gray bees are going to gain more favor in the future from those interested in good wintering and rapid building up in the spring. Italian queen breeders will be well advised to propagate strains of Italians that winter well over long periods of confinement. It has been our experience that many good strains of honey-producing Italians make a very poor showing when it comes to wintering. The Dominion Experimental Farm at Morden has conducted, over a period of years, some very interesting experiments in wintering the results of which were given in an address by Mr. Braun at the Manitoba Beekeepers' Convention held in Winnipeg in January.

We are in the grip of one of Manitoba's coldest winters with the temperature at 42 degrees below zero in December and a record-breaking amount of snow following a wet, cold autumn which delayed apiary work and made outside packing difficult. Our hives were light and, for the first time in my beekeeping experience, sugar syrup feeding was necessary. January has been a very changeable month with recurring mild spells after which the hive entrances were dug out.

Outdoor wintering in tar paper cases has been quite satisfactory the last two years, while our cellar losses were heavy owing to poor ventilation and overcrowding of hives in the limited space. This year all our bees are out in tar paper or single wooden cases and are almost completely covered with snow.

When the days begin to lengthen after the New Year we ask ourselves, "If winter comes, can spring be far behind?" Beekeepers' meetings are the order of the day. We are all susceptible to the annual spring fever, definite symptoms of which are

(Please turn to page 115)



BROTHER ADAM.

I HAVE recently returned from a visit to America filled in the main with admiration and envy. Here in England, bees are largely a hobby. We love them as we love a dog or a pigeon, or a canary in a cage. A hive of bees is a poetical adjunct to a garden. The hum of bees is a musical contribution to the ecstasy of its scents and rioting color.

People keep bees here who never get honey—or very little—but, they are there, they are busy, we like to hear them and we are never so deliciously lazy as when we watch other people at work. The garden is more restful when we sit in a shady place and watch the busy bees. They may be busy to no purpose, but they are busy—very busy, and we lean back and smoke contentedly. We rest the more happily.

It is a side of things I did not see in your country. I am not sure an American ever rests. A long chair in a garden, a drink close by, a long afternoon to dream away—does that ever happen in America? I have never seen it. You seem to relax at 60 miles an hour, you don't seem to set much store by Thoreau.

You count your beehives by the thousands. You don't keep bees; you make them keep you. You pare your expenses down to the bone and extort the last ounce from the flowers. Honey is a food, not a luxury. You produce so much it is as common as sugar and almost cheaper. I found beekeeping in America intensely practical.

So I was much interested in your methods and right now I am busy applying some of them to my work. I am grateful for the patience and kindness of men like Dr. Phillips, Howard Myers, L. C. Dadant, Frank Pellett, Dr. Dyce, Mr. Gooderham, Mel. Pritchard, the veteran John Adams and a host of others.

I wish I had as much intelligence as they have knowledge. I wanted to drink in one gulp all they had dis-

Brother Adam's Feeder

By John Mavie,
England.

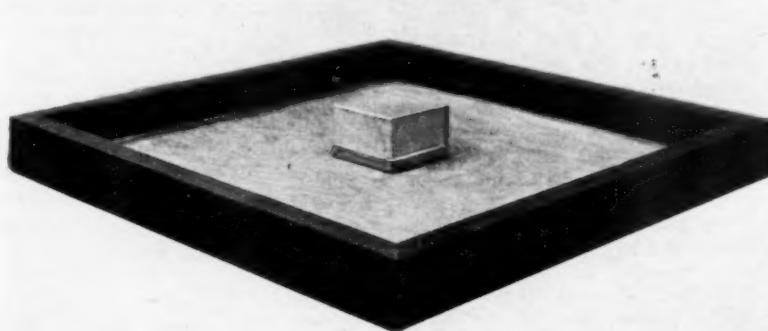
Feeders?—Don't turn up your nose! Here is one that simplifies a handful of problems. Mr. Mavie is enthusiastic, but his enthusiasm may be justified. We hope to arrange to try these feeders ourselves.

tilled in single drops over half a century. I prayed fervently, "Lighten our darkness, O Lord" and they did their best. If my ignorance is incorrigible, it is due merely to congenital defects for which I am more to be pitied than blamed.

But I saw things that surprised me. I thought we Englishmen were alone in our uncertainty about wintering bees, about which hive and which

dealer's funeral. His back doesn't ache. If it means more items on the bill who on earth can blame him? Only a philanthropist would sell one Modified Dadant hive if he could sell two Langstroth.

I have been one of the enthusiasts and I suppose my reasoning followed the lines of everybody else. I knew a shallow comb or small hive wouldn't store enough food under natural con-



Brother Adam's feeder. The metal cap in center is adjustable for slow or rapid feeding, the rate being determined by access to channels in a wooden block which the metal cap encloses.

method is best. I was in your country in Autumn when hives matter most. You have two schools of thought; perhaps three. The third one is all for cyanide. After the crop, kill the bees, order more in the spring. That can hardly be called a method of wintering bees.

The first of the schools that really matters uses one chamber hives. The second prefers two chambers. This confusion did really surprise me. I can understand why a bee supply dealer would boost the two-chamber methods. He would be silly if he didn't. It is sound business to sell two things instead of one. Twice the first cost, twice the wear and tear. If it means double the handling that's not the

ditions. Bees like food close where they don't have to fetch it far in cold weather or change the position of the cluster often. The food chamber idea is a specious argument based on this fact. Honey is cheap; a super of honey left above the heads of the bees is right on the spot; the bees are sure of food. So a food chamber is ideal.

I tried it out when I had a few hives but when my stocks increased, it was another story. The expense killed me. I soon found I must have one chamber and that chamber must do the work of two.

I saw that I must devise some method of getting enough food in all my brood chambers to last until

spring. I didn't find it easy. I lost many bees from starvation. My queens were too jolly good! They kept the food chambers as brood chambers and as long as nectar was coming in, they were mighty successful. They beat me every time. It was not their fault. I'd told them it was a brood chamber. I'd called it so and brood chamber they lived up to.

But, I found when the flow ended, the queen took a rest. By swift progressions the brood chambers emptied. Lots of room now. That gave me my chance. Away with the supers and on with the feeders. Plenty of time left to seal and plenty of pollen at hand and my bees were just as right as the two-chamber fellows and the sugar syrup was better wintering food. Fall honey here is never the best for winter.

But the labor! And the mess! And the robbing! I wasn't after all a lot up on the two-chamber fellow. I wasn't too sure he hadn't the laugh over me. It was pretty dreadful, I admit.

The plaguy tins were the worst. I used 28-pound lever-topped (friction topped) tins. I could never fill them full enough to prevent some splashing over the combs when I inverted them which excited the bees. You can follow our track round by the crowds of bees pouring out to see where this heaven-sent flood has come from. Some of the tins leaked or the lids didn't fit or they weren't pushed in properly. Then the syrup ran out the front door. We had lovely times. The big colonies enjoyed every minute of it.

And the mess of putting it into the tins, and carrying loads of slopping syrup for miles. I loved it. (?)

Then one day a sick monk came to stay at my home and be mothered a bit. He told me he'd invented a way of feeding that was easy. He showed me a model. I could have stolen the idea as easy as winking. If you want a generous and gentle soul, get a hold of Brother Adam. He has no money to give you and his pocket isn't worth picking but he'll let you pick his brains and they're worth much more than his pockets.

Well, I looked at the thing and my first thought was "How simple," and then, "How deucedly clever."

It was. Just a tray, fitting right over the brood nest and a block in the center covered by a tin cap. With the cap in one position, one bee at a time gets the food. Put the cap in another and forty bees can reach it and drink their fill. The tray itself held thirty pounds and a decent colony would take it down in two nights. In other words you fill it once and in two days your colony is ready for winter.

It was ideal. It dispensed with the need of two bodies with one as a food chamber. No extra hive body was needed as with the tin pail to protect the feeder with the job of hauling them to and from the yard. Brother Adam's feeder being a tray two inches deep needed no body to cover it. The usual hive cover on top was all. It was part of the hive for the time being. And because it was shallow and covered all the brood nest, the bees warmed the syrup and kept it warm to the last drop.

We use them generously [it is our understanding Mr. Mavie has about 500 colonies in spite of his modesty.—Ed.] We leave them on the hives all winter, filling each feeder tray

with planer shavings. They form a splendid insulation. Then in the early spring, take the shavings out and if the colony needs a little more food, give it without opening the hive or disturbing the bees. There is no excitement. When the supers come off the feeders go on. When we find it convenient to take out the syrup in big drums and go all around the hives with a long-spouted can, the bees pay no heed and not a drop runs down to excite them. You can feed a whole apiary and when you have done it, not a bee is flying.

So in the spring we watch and as soon as the first pollen comes in, we give each colony a few pounds, whatever the weight of the stores and how they respond.

In the old days, the brood nest did not expand much until nectar was coming in, as well as pollen, but now we produce just that condition with syrup and by the first fruit bloom our stocks are ready for anything. This autumn we fed five hundred within a week and shall do the same as soon as there are flowers in the field in the spring.

So my problem is settled. I am going to use one brood chamber. I don't care whether it is Modified Dadant or Langstroth. I cut out the cost of second chambers, tin pails, extra bodies, robbing and excitement with this simple feeder. I reduce the work to nothing.

When package bees come, I put them on foundation with one of these feeders above their heads. When I am queen rearing, I use a feeder to produce a heavy flow and fine cells. When I am building up for the honey-flow, I give the bees slow feeding and when I am preparing for winter, I give them rapid feeding. Just one movement with the little cap and it is altered to either.

So I looked at my sick monk and I said, "I am going to see that you get a patent for that." It was some job. They doubted if he could. "He's a monk," they said.

"Granted," said I, "and a monk has to live as well as pray. So just put it down as Brother Adam's patent, as quick as you like." And they did. Now every up-to-date beekeeper in England has bought the thing.

Brother Adam said, "You patent it; I'll let you have it." I guess somebody would have laughed if I'd pretended to have brains enough to invent the old thing. It's going to change beekeeping.

There was a day when I hated feeding like poison; hated the sticky mess; the unholy row; the difficulty of doing it without letting heat escape from the cluster, the rusting of tins, the waste of feed, and the whole business!

With me, that day is over. We feed now as quickly as we get the feeders into place and it has become a simple part of preparing the colonies for winter.



Filling the feeders, quickly and easily; no mess, no robbing.

FROM THE LITTLE BLUE KITCHEN



MARCH WINDS.

The March winds blow; there's sleet and snow.
It's cold again as winter;
These Ides of March quite take the starch
Out of the quickest sprinter!

But tho' it's cold, and winds so bold,
And storms seem ever brewing,
Still March is spring, and soon will ring
The songs of birds a-wooing.

And some sweet dawn, March will be gone
And, all the air perfuming,
Bright flowers of May, in colors gay
Will everywhere be blooming!

Lida Keck-Wiggins.

CAN you imagine Honey Lady's surprise, to say nothing of embarrassment, when on a recent morning, she dashed out of Blue Kitchen to open the front door and was greeted by two of the best known bee men of the Empire State? Well, this remarkable thing happened, and the gentlemen were no other than Mr. J. H. Joyce, President of Dutchess County Beekeepers' Association, and Professor George H. Rea, Assistant Professor of Apiculture, Department Entomology, College of Agriculture, Cornell University!

Honey Lady was thrilled to meet such high-ups in the Bee and Honey business, and found them very interesting gentlemen, "in the know" about hundreds of things connected with our friend the busy bee.

The result of this visit is going to be, as Honey Lady feels sure you will see in another part of the page, that Blue Kitchen will from now on be supplied by the Hudson Valley Society of Apiculture with delicious Dutchess County clover honey for laboratory purposes. Honey Lady, innocently enough, had imagined nobody kept a bee in these parts, as in drives about the beautiful Hudson Valley and among the lovely Catskill country, she has yet to see a "honey-for-sale" sign at a farm gate. She said as much to the distinguished gentlemen who called, and they said the reason was that there is such a tremendous demand for honey here that beekeepers do not have to solicit roadside trade! Nothing like "living and learning." At all events, Blue Kitchen has now had a personal visit from two bee leaders who had been readers for a long time of our department and whose wives have been users of our recipes with good results for a long time too! So let us all pat

ourselves on the back, take a fresh breath o' country air, and go to our task of making life sweeter for folks, with renewed courage.

With the coming of the spring days, everybody's system as well as everybody's house needs a thorough cleaning out. Beekeepers' families are fortunate in that the product of their colonies is just about the finest laxative, or spring tonic, there IS, and when added to other foods, its equal is not to be found as a food element for spring.

Now that we housewives may use an extra egg or two without a twinge of our saving-instinct, conscience, a recipe wherein honey and eggs may be palatably combined is in order, and here 'tis! This has been used many times by Honey Lady and bears Blue Kitchen, if not Blue Eagle label.

Boiled Custard.

2 cups milk (fresh or evaporated)
3 egg yolks
½ cup honey
½ teaspoonful salt

Directions: Mix the honey, eggs and salt. Scald the milk and pour it over the eggs. Cook in a double boiler until the mixture thickens. This custard, as it is soft, is suitable to use in place of cream to pour over stewed fruits.

Honey Lady's very own Baked Honey Custard is capable of about as many changes as there are fruits in the orchard, or the garden, or in tins. Here is the regulation recipe, but always it may be made a bit different by the addition of a few crushed strawberries (well sweetened by mashing into them a little honey), sliced peaches, apricots, dried or canned, etc.

Baked Honey Custard.

1 quart scalded milk
4 to 6 eggs
½ cupful strained honey
½ teaspoonful salt
Dash nutmeg

Directions: Beat the eggs slightly, stir in the honey, then the salt, then slowly the hot milk. When well blended, pour into cups (about six small custard cups) and grate a little nutmeg on top. Set the cups in a pan of hot water and bake in a moderate

oven until a pointed knife, or a straw comes out clean when inserted in the custard. Do not let the water in the pan come to a boil.

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In connection with these recipes and the use of honey therein Honey Lady recently learned something, that to her, at least, was quite invaluable. It is this, even if the honey is dark in color and rather of too strong a flavor for "raw" consumption, when used in connection with milk and eggs the undesirable quality is lost and the flavor of the article being cooked is, if anything, improved. Honey Lady discovered this recently, when having bought two very artistically bottled or rather "jar-red" portions of honey she opened one of the containers and spread some of the nectar on her toast. Sad to relate, honey, as well as some other earthly sweets, is not always what it seems, or "looks" to be. This particular lot was so strong and raspy she could not eat it at all. Being constitutionally opposed to wasting anything, however, (thanks to some Pennsylvania Dutch blood) Honey Lady didn't throw away the deceptive amber fluid, but next time she made custard used it and took a chance. Not a member of the family knew the difference! This proved equally true when she made up the contents of the other jar with her next "batch" of electric refrigerator ice-cream, mixed with fresh strawberries. Honey Lady passes along this heartening bit of news as more than once, Blue Kitchen readers have written in to know what to do with dark and strong flavored honey they happened to have on hand.

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Now that the lovely pink stalks of rhubarb are beginning to push up through the black soil in the sunny back yard corner, or in the garden and you are baking your first rhubarb pies, substitute honey for the cane sugar you usually use, and note what an added delicious flavor it gives the pie filling. The combination of rhubarb and honey is wonderful for the "tummy" in the spring.

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Here's an idea for the kiddies' lunch basket these March days—Spread a mixture of cream cheese and honey between slices of crusty, home-made whole wheat bread, and see if they don't ask for "more" in a day or so.

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AND instead of causing a frown that it is hard to rub off which settles over Johnnie's or wee Betty's childish face, by an insistence on your part of the "annual dose" of Castor Oil, just quietly bake a few bran muffins, sweetening them with honey, and also spread them with the delicious bee-sweet and—well you'll not need to administer the awful Castor!

Honey in Small Packs

By G. L. Jarvis,
Pres. Canadian Honeys, Ltd.,
Ontario.



How convenient it is to serve honey from a small pack! The consumer is soon ready to make further purchases.

THE small honey pack is used to cater to the appetite, or lack of appetite, as found in our large centers of population. The automobile and the office desk are perhaps the greatest contributing causes to the popularity of the small pack in our towns and cities. To offset the normal desire for food in quantity, which supplies the necessary energy for strenuous physical work in the open air, the city dweller must depend on variety in his diet to supply the stimulus so natural to those who work on the farm.

A typical city appetite demands a small portion of this and a small portion of that, a taste of these and a taste of those. This has been carried to such a state of perfection that one may wonder if in the future at least one course will not consist of definite odors.

These consumers do not stop to consider just how uneconomical it is to pack foods in containers to suit this evolution of smaller and smaller packs. Could they but see the cost figures in many of our packing plants they might at least pause before making out the next list of household requirements. As the size of the package decreases, and the line is sometimes crossed where the expense of the package represents a greater outlay in actual cash than does the contents, one begins to marvel at the potency of the city "package" market. The money spent for food containers each year would perhaps supply sufficient food for the world unemployed and still leave a handsome surplus.

We, as producers and packers of honey may have our views as to the best and most economical size of container for city trade but the dust on the covers of our five-pound and ten-pound size pails in many of our stores should tell us the story in no uncertain terms. The day of the small pack is here; but have we given it the careful study it needs and attempted to profit by the experience of other food packers? It is not necessary to answer this question for you. Yes, you have the correct answer; but how can it be done? The answer is simple. How is it being done with other products? Your answer is again correct. These

products are collected in central packing plants where they are graded, perhaps changed in form, pasteurized, and packed in small attractive containers with that "city appetite" appeal. The market not only suggests these packages but demands them. If we are to increase the per capita consumption of honey, it cannot be done by suggesting that the honey user could be induced to consume a larger portion than he is doing at the present time. The invitation to eat more honey is dangerous. Do you remember the time you visited another beekeeper, had a most delightful meal, until you were requested to try a sample of his particularly fine honey. The dish placed before you contained about one pound of honey. If you ate it all you knew that you would feel physically ill, and if you did not you would be mentally ill at the thought that your host might conclude you did not care for it. We need more honey consumers rather than larger honey consumers.

Perhaps the best method to induce more people to eat honey is through the more and more popular small pack. You, no doubt, remember the story of the mouse and the baited trap, "First he took a nibble then he took a bite," and if we do not supply the nibble how can we expect the new honey user to take a real bite.

The small honey pack is increasing in Canada at a very rapid rate, but it must still increase to a large degree before it will occupy the place in the sun all "fenced off" ready to receive it.

A Bee Book for Children

From England comes a delightful little book, called "The Children's Story Book of Bees." It is written by Gareth H. Browning and is a strange mixture of fact and fancy. There are fairy stories and ancient legends about bees along with interesting descriptions of the life and habits of the insects. The chapters describe the gathering of the honey, the inside of the hive, the life of the queen, the sentry bees, the bees' sting, how the bees swarm and similar useful information. The book is likely to interest any child with a vivid imagi-

nation and will give him a good idea of the life and habits of the insects as well.

It is published by Burns, Oates and Washburn, Ltd., 45 Newgate St., London, England. It may be had from them for two shillings, six-pence which is about sixty-five cents of American money.

Beekeeping Along the Assiniboine

(Continued from page 111)

manifested in hours spent in poring over past volumes of bee journals carefully kept with their invaluable fund of information and in studying price lists and bee supply catalogues. At this time of the year we lay our plans for better apiary and honey house management, but it is too soon to attempt to estimate the toll the long winter is taking of our colonies.

Waffles Plus Bacon and Honey

When making waffles slice some bacon very thin and cut it into strips about one inch square. After putting the waffle batter on the iron place one strip of bacon in each section of the waffle and bake for the usual time. This gives the waffle a delightful flavor. All that is then required is to apply honey and to eat the waffle.

Orville B. Rogers,
Iowa.

Well, Who Can?

Who can explain this? I have bottles of honey left over from a year ago, all taken from the same can, heated to the same temperature (160°), and bottled at the same time, in the same way. Some have shown no traces of granulation, others are beginning to granulate, and a few are granulated solid. No matter how much care is taken, this condition always maintains.

S. F. Haxton,
Pennsylvania.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

TRANSFERRING FROM EIGHT TO TEN FRAMES

1. I am a beginner with bees, last season being my first experience with bees. I started out with one colony and put five colonies in the cellar last fall. Two colonies are in eight-frame hives but I wish to change them to ten-frame hives. Can I make this change before the honeyflow begins and how should I do it?

2. One of my ten-frame colonies is black bees which I wish to requeen with an Italian queen. How early in the spring can I requeen and how should I do it? Are southern raised queens all right for this far north?

WISCONSIN.

Answer.—1. There is nothing difficult about changing a colony of bees from an eight to a ten-frame hive if the combs are straight in the frames. All you need to do is to put the larger hive on the stand of the other and, opening the latter, transfer its combs from the one to the other adding a frame or two of comb foundation in the remaining space. If the combs of the eight-frame hive are not straight in the frames, it will be necessary to straighten them a few days previously. These matters may be attended to at any time when the season opens and the bees are working in the field.

2. If you wish to Italianize that colony of black bees you should buy a queen from the South in the early part of the season.

REMEDY FOR MOTHS

Moths got into my honey house this fall and did lots of mischief to my fancy section comb honey. What gas will kill these moths, yet not harm the beekeeper if inhaled?

NEBRASKA.

Answer.—Moths will get into any house where bee material is kept. The only method is to keep your bee house proof against moths. They will lay eggs on the outside of the boxes. If you wish to destroy them, buy brimstone and burn it in a dish within the house where the combs are kept. Brimstone will not hurt you unless you stay with it while it is burning.

TRANSFERRING DISEASED COLONIES

We are thinking of transferring our diseased colonies of bees to clean hives. The disease is American foulbrood. We plan to wash our diseased hives and frames with lye water and destroy the foundation. What do you think of the method, and how would you use it?

We also planned on using surplus comb foundation in our extracting supers. Would they stand up when extracting honey from them?

Answer.—Your plan is all right provided you transfer every colony, because if you leave some untransferred, there is a chance of some of the bees of the diseased colonies going into other hives and carrying the disease with them. Your bees must be without combs for a couple days, so they will consume the honey they carry in their honey sack. Then give them foundation and feed them on some food that you know to be reliable. If you let any of the bees of the diseased colonies go into other hives they will carry the disease with them.

Two years ago we tried to use surplus foundation in the manner which you suggest. The result was disastrous. It simply will not stand up when whirled—no matter how slowly—by the extractor.

PACKAGES IN SPRING—POLLEN

What is the best way to put in package bees in the spring, April 1st? I have a good many brood frames full of the best clover honey which I could use. Or is it best to use sheets of foundation only and then feed sugar syrup, as I do not have many empty drawn combs of foundation? If I use one full comb of honey and the rest foundation will the bees draw it out for the queen without feeding syrup?

I notice in several hives there are full frames of pollen, or bee bread as some call it, that are packed in there and are very heavy. I do not believe the bees will ever clean it out, and it takes up too much room and does not leave much room for brood and honey. Should I take out some of the full frames and put in drawn comb or foundation, or combs of honey where they are short on pollen?

NEBRASKA.

Answer.—It will be all right to hive the bees on comb foundation with one comb of honey. Place the latter in the corner away from the entrance to avoid robbing.

A comb of pollen in each of the newly made colonies will be all right if it is not mouldy or fermented. The bees will use it to feed their brood. You must avoid giving your bees too much room so they may not be in danger of robbing, but combs and foundation given in moderate amounts will be good. If you have division boards to confine the cluster, use them.

PACKAGE BEES

My bees are located in southwestern Iowa. At what time of the spring should I purchase package bees? Will bees placed on comb foundation gather enough to live on over winter?

IOWA.

Answer.—The time to get package bees is at the beginning of fruit bloom. However, if you wait till then to order them, they will reach you too late.

As to the bees being able to make enough to winter upon, it is a matter which cannot be decided with a yes or no. If they arrive in time and the fruit bloom is profitable, it is probable that they will thrive. This is as much as we can tell you. They often need help.

BEES IN GREENHOUSE

I am furnishing bees to a greenhouse for the purpose of pollinating cucumbers. Do you think I should give them a can of thin syrup when I put them in the house? If I were to put a board in front of the hive would it keep the bees from becoming bewildered and killing themselves by flying against the glass? They tell me at the greenhouse that the colony dwindles badly while there. I do not see why this should be true, for brood rearing commences as soon as they are in the house. If they have plenty of stores and get plenty of pollen will they not increase instead of dwindle?

OHIO.

Answer.—I am not much experienced with bees in a greenhouse. But there is no doubt that they will dwindle while in there because many bees fly against the sash and do not return to the hive. Make your contract so that it will be almost a payment for the colonies.

If you put some sort of a board in front of the hive so that they will notice that they are in a strange place, it may help a little. But do not give them any feed unless they are short of food as this will increase their restlessness. If you can fix things so

that they will return to the hive in the evening, it will help matters.

RED CLOVER FOR BEES

1. Is there such a thing as a red clover strain of Italian bees? If so, where can queens be bought?

2. Is it wise to remove or destroy a good part of drone comb if room is needed in the brood chamber? What time of the year is best to do this?

3. How can I prevent scum from forming on extracted honey?

Answer.—1. There are no red clover bees. We find bees working on red clover sometimes and sometimes not. It depends mainly upon the amount of honey in the blossoms. If there is much honey in them the bees will be able to get some of it, otherwise not.

2. We always destroy drone combs, except in the hives in which we rear drones. We select those hives, so as to have a good breed. The comb that we remove is replaced with worker comb foundation. Otherwise the bees would probably rebuild drone combs in the same spot. There is usually too much drone comb in a hive of bees. Do this in the spring.

3. If your honey is well ripened, there will be no scum upon it. If not well ripened, you will probably find advantage in heating the honey over water (*au bain-marie*) up to about 140 degrees.

PACKING WITH PAPER AND SAWDUST

I have always wintered my bees in wood cases but as they are expensive I should like to try water-proof paper. I think I shall make a wood bottom to accommodate 2 hives set together. I then intend to tack the paper around the edge, pack with four inches of sawdust on each side and six on top, fold the paper over and tie it with string. I shall probably tack the paper along the entrances.

MICHIGAN.

Answer.—I do not believe that I could improve on what you suggest you wish to do. Perhaps the only change I would make would be to use a little less depth of packing.

Take care not to embarrass the bees with too much in their way to the entrance.

BUCKWHEAT IN MIDDLE WEST

I want to grow some buckwheat for my bees. When should it be planted? How much seed per acre and what variety? How much should be sowed to meet the needs of twenty-five hives of bees?

MISSOURI.

Answer.—Buckwheat is not dependable as a source of nectar in the Middle West. It yields freely in the humid regions around the Great Lakes, in Ontario, in New York and nearby regions and in the highlands of Pennsylvania and other eastern states. At times it gives some honey in the West while at others it fails almost entirely. For that reason it is impossible to estimate the amount necessary for a given number of bees. In some seasons an acre would supply them well while in others they would get little if any honey.

Buckwheat is planted late in spring after all danger of frost is past and matures in two to three months. It is usually planted as a catch crop after corn and grains are planted. About a bushel of seed per acre is the usual amount seeded. There are conflicting reports from different localities as to the best variety for the bees. The silverhull is often recommended.

CURE FOR ROBBING

Please tell me what to do with a colony in which the bees are unmitigated robbers.

TEXAS.

Answer.—Usually, when you remove all chances of robbing from a colony of robbing bees they are very soon cured of the habit. But if you cannot cure them in that way,

believe the next best way would be to catch all the bees that have acquired the habit of robbing and destroy them. The young bees of such a hive are just as safe as the bees of any other colony and it is quite probable that many of the old bees do not have the habit either.

At any rate, I would recommend trying this on the active robbers. Otherwise it might be advisable to remove the colony three or four miles till the bees lose the habit.

LAYING WORKERS

1. Do the bees recognize a laying worker the same as they do a queen?
2. In case two laying workers meet in a hive, do they fight each other?
3. Do laying workers ever lead out a swarm?

NEW JERSEY.

Answer.—1. I do not believe bees have any consideration for a laying worker similar to what they have for a queen. I have seen half a dozen workers laying at the same time in a hive and I did not see them considered by the other workers.

2. I am quite sure that laying workers will not fight one another.

3. Even queens do not lead a swarm but follow it. I must say that this information is partly an opinion. I have seen many drone-laying workers but never paid much attention to them.

KIND OF CLOVER

Which kind of clover is best for bee pasture, white, yellow, or Hubam? If one is better than the others, I would like to know which is the best.

MISSOURI.

Answer.—Yellow sweet clover is the earliest of the sweet clovers, but the white sweet clover (*mellilotus alba*) is the best for honey production. We recommend both kinds as well as the Hubam. I would recommend that you try them all. However, the white sweet clover is the most important of the lot as it blooms practically all summer and is one of the best honey plants.

Keep Your Customers Posted

Here's a new one: My comb honey generally has been light in color, but in 1933 it was darker than usual—a light amber, excellent in flavor. A customer who had been buying for years brought this year's supply back, saying it was "mouldy" because of the color and explaining that they were "afraid to eat it." An explanation satisfied this family. I told other customers in advance.

S. F. Haxton,
Pennsylvania.

Fireweed to Be Tried in Oklahoma

Report of fireweed honey has spread to Oklahoma, where an experiment in growing fireweed for bee pasture will be tried. Seed from Cowlitz County, Washington, where the flower grows abundantly, has been supplied and it is hoped that, in spite of the great climatic difference, a good stand of fireweed can be obtained.

C. M. Litteljohn,
Washington.

Marketing Agreement for Package Bees, Nuclei, and Queens, Seems Assured

Up to the time of release of this notice the Secretary of Agriculture has not signed the marketing agreement for package bees, nuclei, and queens. There is no indication, however, that it will not be approved.

The Agricultural Adjustment Administration is working on hundreds of marketing agreements, and since each must be carefully scrutinized by legal and economic experts it is only natural that the marketing agreement for package bees, nuclei, and queens should have slow passage in its route to approval. The marketing agreement, however, has run the gauntlet of many committees in the Agricultural Adjustment Administration, and if there were any doubt about its legality it would have been discovered long ago. The fact that the shippers have so unanimously supported the agreement is a big factor in its favor.

The delay in having the agreement approved has unfortunately caused a few shippers to jump to the conclusion that it would not be approved; consequently, in accepting orders they are disregarding some of the provisions in the agreement, particularly those with respect to minimum prices. Between the Control Committee and the Secretary of Agriculture there is ample authority to enforce every provision in the agreement, and it is the consensus of opinion that any contracts made at prices less than the minimum will be subject to cancellation. If such orders were not subject to cancellation it would be almost impossible to put the agreement into effect since there would be some who would continue to accept orders at ruinous prices, and some would even go so far as to book orders several years in advance. The only way an agreement of this kind can be made effective is by exercising firm control over every shipper.

The Agricultural Adjustment Act was enacted as an emergency measure so that the cancellation of contracts is fully justified, and shippers are warned that any infraction of the provisions of the agreement will subject them to disciplinary action on the part of the Control Committee. Buyers of package bees are also cautioned not to place orders at prices less than the minimum with the expectation of having the orders filled. If bees are delivered under terms other than those specified in the agreement, the license of the shipper is subject to revocation, and without a license it is not possible to engage in the package bee or queen business.

As soon as the marketing agreement is approved each shipper of package bees and queens of which the Agricultural Adjustment Administration has knowledge will be sent a copy of the agreement for his signature. At the same time he will be asked to submit certain data relative to the size of his business. Should the agreement be approved prior to the issuance of the April bee journals, as it doubtless will be, package shippers and queen-breeders who have not received a copy for signature should communicate this fact to Mr. Lawrence H. Sample, Food Products Section, Agricultural Adjustment Administration, Washington, D. C. Approval of the agreement will also be announced generally in the public press.

Jas. I. Hambleton,
Sr. Apiculturist.

Loyal Canadian Bees



This picture is sent by W. D. Albright, Superintendent of the Beaverlodge Experiment Station, Alberta. He says, "There is quite a story about it. We were to have a bee handling demonstration under a bough covered canopy where picnickers are entertained on the lawn. It was scheduled for 2 P. M. but we were a few minutes late eating dinner. Exactly at 2 P. M. a swarm, the first one in two years, issued with several virgins and settled mainly on the corner of the canopy right beside the Canadian Ensign.

Had we staged this ourselves, we could not have improved on the bees' behavior by an inch or a minute. I am usually a crank on schedule and I excuse it to audiences by telling them that if I were not prompt the bees would get after me."



Winnipeg Free Press Boosts Manitoba Beekeeping.



Cartoon by Arch Dale in Free Press. Shows old man depression getting a real stinging from Manitoba honey. The hive is the Association.

With the cooperation of L. T. Floyd, Provincial Apiarist, the Winnipeg Free Press gave wonderful publicity to the affairs of Manitoba beekeeping during the meetings and convention of the Association. In six different issues from the 20th to the 27th of January, the paper contained feature items, notes and comments on the reports from the beekeepers' meetings. Portions of the different items are as follows:

"Beekeepers of Manitoba may winter their bees hereafter instead of letting them die in the fall and getting new bees in the spring."

* * *

"The Manitoba Association has elected an executive consisting entirely of men. What! No queen beekeeper?"

* * *

"Manitoba beekeepers are informed that the worst grasshopper invasion in history threatens the West. We hope beekeepers will not take this as a hint to start boosting for a diet of locusts and honey."

* * *

J. Wood of the Extension Service Department of the Agriculture of Manitoba predicted that the North American continent next summer will face the worst infestation of grasshoppers in its history. Southeastern Manitoba according to Mr. Wood will be worse off in 1934 than it was in 1933, the ravages of a grasshopper plague being added to the drought losses of the past few years in this dried out section.

"About Saskatchewan, Mr. Wood said, he does not suppose any district on the continent ever faced a situation like that province will have to meet next summer. Its 22,000,000 acres of crop lands are severely infested. Alberta's condition is about the same as that of Manitoba."

"Representatives of infested states in the United States are in Wash-

ton seeking an appropriation of \$2,500,000 for grasshopper control."

* * *

"Mrs. V. E. Phillips of Dauphin, Man., spoke at the convention on 'Uses of Honey in the Home.' Mrs. Phillips is the wife of a beekeeper and says that 600 pounds are used annually in a family of four, honey having replaced the sugar bowl almost entirely. Mrs. R. McWilliams and Mrs. T. J. Harrison also gave their experiences with honey in the kitchen."

* * *

"Roy Mullins of Myrtle, was elected President of the Manitoba Association. Other officers elected were: Honorary president, His Honor, J. D. McGregor; first vice-president, J. P. Rippingale, Oakbank; second vice-president, Bro. T. Pineault, Otterburne; Secretary-Treasurer, L. T. Floyd, Provincial Apiarist. Directors: Etienne Bissonnette; J. W. Brathwaite, Homewood; E. Braun, Morden; Leslie Castle, Gilbert Plains; Carol Clark, Treesbank; Fred Cornes, Portage la Prairie; William Kreutzer, Steinbach; Jack Mackison, Hayfield; Prof. A. V. Mitchener; B. A. Tedford, McCrea; Dr. H. N. Thompson, Virden, and W. H. Belton, Plumas."

Gain in Manitoba Short Course.

We have just completed our Twelfth Annual Short Course at the University of Manitoba. Twenty-eight students were in attendance from many parts of Manitoba; many more than last year, indicating a revival of interest in beekeeping in the Province, especially with prospects slightly on the upgrade.

A. V. Mitchener,
University of Manitoba.

French Canadian Association of Manitoba.

During the Manitoba Convention in Winnipeg in January, the Section of the French-Beekeepers' Association elected the following officers: Mr. J. Tessier, St. Pierre, and Mr. Bellerive, Cary, as President and Vice-President; Brother T. Pineault, C. S. V., Secretary-Treasurer. Directors for the year: Rev. A. H. Laurin, St. Adolphe; J. Bissonnette, Inspector, St. Jean-Baptiste; J. Lafrance, Agronomist, St. Pierre.

The following proposals are made:

Cooperation in the purchase of bee packages, of honey cans and bee-keeping supplies. Better distribution

of apiaries in the district of St. Pierre-Otterburne. Maintenance of an Inspector and an Assistant. Wider publicity and beekeeping lectures to spread the facts about honey, and create greater consumption and to obtain better prices.

Lectures were given last winter at St. Pierre and St. Anne and were organized by the District Agronomist of St. Pierre, Mr. J. Lafrance, assisted by Mr. L. T. Floyd and Bro. T. Pineault. Average attendance was 53 to 60 persons.

Bro. T. Pineault, C. S. V.,
Director and Secretary of the
French-Canadian Bkprs. Ass'n.

Northwest Honey Producers.

A new organization has been formed to aid in marketing honey. It is called the Northwest Honey Producers. Officers are P. J. Doll, Minneapolis, President; G. C. Matthews, Minneapolis, Secretary; Board of Governors: M. W. Cousineau, Moorhead; Rev. Francis Jager, St. Bonifacius; B. I. Evans, Windom; B. L. Morehouse, Montevideo; W. O. Victor, Mankato; H. A. Sundine, Crookston; S. P. Elliott, Menomonie, Wisconsin; Irvin F. Gunter, Manvel, North Dakota; E. G. Brown, Sioux City, Iowa; J. D. Beals, Dwight, North Dakota; W. B. Erickson, Red Wing; Frank Rojina, Excelsior; M. C. Tanquary, University Farm School, Minneapolis.

Minimum prices for members under agreement with the Association are as follows:

6 oz. bottles per dozen	\$1.10
16 oz. bottles per dozen	\$1.75
24 oz. bottles per dozen	\$2.45
5 lb. Pails honey per 100	
to wholesalers	\$37.50
5 lb. Pails honey per dozen	
to stores	\$4.80
5 Gallon Cans, small lots (each)	\$4.20
5 Gallon Cans, 1000 or more	\$3.60
Comb Honey per dozen	\$1.75

The purpose of the Association is to secure signers of a pledge to maintain minimum prices until enough producers and dealers are signed up to include 75 per cent of the crop in the region in which the Association operates, with the purpose of joining the NRA to maintain fair prices in all markets. Membership blanks may be obtained from the Secretary, G. C. Matthews, 916 5th St., S. E., Minneapolis, Minnesota.

Vigo County Has Contest

To locate unreported and neglected apiaries in Vigo County and to make the work of inspection easier, the Vigo County Beekeepers' Association (Indiana) is conducting a contest beginning January 19th and ending May 16th. A pound of surplus foundation will be given to the one reporting the most apiaries to the Association. Other contests are planned for the summer. Prizes will be

rewarded to the neatest and best situated apiary; best producing apiary; etc. There will be more details about this later.

Essex County (N. J.) March 2.

The Essex County (N. J.) Beekeepers' Society will hold their regular monthly meeting in the Newark City Hall on Friday, March 2nd at 8:15 P. M. This makes the first time in thirteen years that they have had to change their meeting date from the first Thursday of every month. The April meeting date will be announced later.

John Conner,
New Jersey.

Washington Transfers Bee Inspection.

In Washington, in a bill recently passed by the Legislature, the bee inspection has been transferred from the State College to the State Department of Agriculture.

I. L. Neil,
Washington.

Ontario Honey Co-Op Report

We have at hand the annual report of the Ontario Honey Producers Co-Operative Ltd. for the fiscal year ending November 30, 1933.

For the first time in its history, the company shows the enviable position of no money borrowed, and cash in the bank. All honey pools for years previous to 1933 have been paid.

No doubt the short crop of honey in the 1933 season, coupled with a stiffening in prices has enabled the cooperative to work itself into a desirable financial situation. The present officers and directors should be given due credit.

The report shows that 38% of the honey sold during the fiscal year went for export, the balance being sold in the domestic markets. The Secretary-Treasurer anticipates that at least 80 per cent of the 1933 crop will be sold at home.

The report occupies eight pages. Complete set of officers is not given, but those given are: President, Morley Pettit; Managing Director, T. H. Shield; Secretary-Treasurer, L. A. Inkster; and Director W. R. Agar.

North Dakota Beekeepers Meet.

The North Dakota Beekeepers' Association held its annual meeting at the State Agricultural College at Fargo on January 17th. Beekeepers were present from many miles around to hear their problems discussed in the one-day session of talks on beekeeping. From the standpoints of attendance and interest shown, it was considered the best meeting held by the Association in years.

Hon. John Husby, State Commissioner of Agriculture, in addressing the group told the bee men about the duties of his office and the interest of

Transparent Honey Jars In Two Styles



WRITE FOR SAMPLES AND PRICES

Crystal clear jars of strong simple construction in four sizes—Individual, Half Pound, One Pound and Two Pounds. And the new Bee

Hive jars, attractive for table use, with definite label space. In Half Pound, One Pound and Two Pound sizes. Gold or white screw caps.

HAZEL-ATLAS GLASS CO.

WHEELING, W. VA.

SALES OFFICES IN ALL PRINCIPAL CITIES



Why Fish Around for Better Bees and Queens

From April 15th to the last of June we will be able to supply you with good heavy packages of nice young three-handed Italian bees. Headed with queens that give satisfaction and are not likely to be superseded the first season.

Every precaution taken to have them reach you on time and in nice shape.

CODE PRICES—Packages (with queens) November 1 - May 31.

Two-Pound	1-9: \$2.65	10-49: \$2.55	50 or more: \$2.45
Three-Pound	1-9: \$3.40	10-49: \$3.30	50 or more: \$3.20

1-9: 85c	10-24: 80c	25-49: 75c	50 or more: 70c
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(Discounts from price of 50-10% for 100-249; 15% for 250 or more—Packages or Queens)

SHAW & HOMAN

SHANNON, MISS.

PACKAGE BEES It Will Cost You NOTHING

To book your order NOW for bees when you want them BY FAST EXPRESS. The same old reliable Italian stock, young vigorous and strong, ready to go to work and build up a honey producing colony.

CODE PRICES.

Write us your needs.

State inspected.

SHAW AND RAMSEY

:: LOREAUVILLE, LA.

PETITT'S PACKAGE BEES QUALITY - SERVICE - EXPERIENCE

Now that the War is over, these will decide your choice.

WE HAVE THEM ALL

Even with prices well above the average we sold our surplus year by year.
(About 8000 pounds net.)

OUR SPECIALTY

Young Italian Bees, Best Young Italian Queens, Light Convenient Packages in all Sizes. Two-Pound, Three-Pound, Four-Pound Packages. Also Five-Pound Orchard Packages for Fruit Growers. Bees without Queens in All Sizes of Packages.

OUR SERVICE

Fast Night Express picks up bees after they cool off. Shipments made exactly as Ordered. Rain or Shine they are off on time. Even Rush Orders seldom delayed. Full Weight on Arrival and Complete Satisfaction Guaranteed.

OUR PRICES

Are According to Code under A.A.A.

If you are thinking of trying some Package Bees, If you are thinking of changing your Shipper, Try Pettit's Package Bees, They Satisfy.

MORLEY PETTIT ALBANY, GEORGIA



WALTER T. KELLEY

April 1 Delivery on Bees & Queens

For years we have been producing 100 queens or more daily, starting April 1st. We know how and you can depend on us. Send us your early orders. April 1st is summer time at Houma and there is no danger of our queens being chilled while caging.

WAX ACCEPTED IN TRADE AT HIGHEST MARKET PRICES FOR BEES,
QUEENS, CYPRESS HIVES, ETC. BIG 1934 CATALOG FREE.

GULF COAST BEE CO., HOUMA, LA.



— Foundation —

Our 1934 price list will be ready soon. We will work your wax into foundation at prices that are right. Our foundation has given wonderful satisfaction and is used by beekeepers everywhere.

Forty-seven years of prompt service and square dealing is proof that our foundation has given excellent results.

We carry a full line of supplies.

GUS DITTMER CO., Augusta, Wis.

his department in the welfare of the bee industry. Carl Sundberg, Fergus Falls, was presiding officer. Following the Secretary's report and other association business, talks centering around various phases of bee management were given by the speakers.

Beekeepers in attendance expressed real concern regarding the marked increase in prices of package bees for the coming season. They pointed out that the price of packages has almost doubled since 1933, while the price of honey has not made a corresponding increase. Beekeepers were urged to reduce overhead costs in beekeeping by giving their colonies better attention. Well cared for colonies winter over in satisfactory condition and give better returns in honey production, it was pointed out.

That beekeepers should assist the inspector in the work of inspecting apiaries of fifty hives or more was maintained by a number of the bee men present. This, they said, would permit the inspector to examine an increased number of colonies without additional cost. The opinion was expressed that the owner of an apiary of fifty hives or more should assist the inspector by opening the hives, taking out combs, and closing the hives. For small apiaries, it was felt that it would make little difference as to whether or not the owner assisted the bee inspector.

A banquet and program of entertainment following the day's program featured the evening with more than fifty present. Dean H. L. Walster, dean and director of the North Dakota Agricultural College, introduced the speaker of the evening, Sydney Montague, retired officer of the Royal Northwest Mounted Police and explorer. Mr. Montague told the bee men of his experiences in the far north with the Eskimos, and exhibited many specimens of their handiwork. He told the beekeepers that the main difference he saw between an Arctic depression and a depression in the United States is that in the Arctic region, only a shortage of food causes a depression, while in this country an overproduction of food causes a depression with its consequent suffering among humanity.

Wallace Manikowske of Mooreton, North Dakota, in discussing package bees, related that for the past two years he has hauled package bees from one of the southern states by truck instead of having them shipped by express. Each season, the trip was made in early spring. His auto truck had a capacity of between three hundred (300) and four hundred (400) two and three-pound packages. He pointed out that if weather and road conditions are satisfactory that hauling the packages by auto truck will effect a saving in transportation costs.

The Sisters of St. Benedict, Crookston, Minn., related their experiences

in beekeeping and told how they had popularized honey on their local market by the use of educational exhibits featuring honey and its uses.

Others who took part in the program include Charles S. Engle, Fargo; J. W. Beatty, Felton, Minnesota; C. W. Phillips, Moorhead, Minnesota; Fred D. Butcher, Extension Entomologist of the North Dakota Agricultural College, and the writer.

Officers elected for the ensuing year include Wallace Manikowske, Mooreton, President; P. J. McGlynn, Fargo, Vice President; J. A. Munro, State College, Fargo, Secretary-Treasurer. For directors, Oscar Miller, Fargo; John Q. Wieland, Dazey; and Ernest Kapaun, Alice.

J. A. Munro,
Secretary-Treasurer.

Our Cover Picture

(Continued from page 95)

strength that has raised the country to its present leadership.

"On the Canadian side is Table Rock Tunnel where the waters of the cataracts rush over the visitor's head with a terrifying roar. A few miles below the Falls, the Whirlpool Rapids dash mountains high, plunge fathoms deep, guarding the path to Lake Ontario, unbridled Nature in her most primitive state.

"One of the greatest spectacles is the famous illumination of the Falls in colors at night. W. D'Arcy Ryan, director of the illumination laboratory of the General Electric Company, developed and installed the complete battery casting 1,440,000,000 candle-power on the Falls. By using ten different color screens with each lamp, they produce the most wonderful blending and fading of colors ever witnessed."

Honey Getting Package Bees

Handy to Eastern Buyers

Our bees have been selected for honey gathering for a number of years, and are guaranteed to please, and are nearer to the East than any other shipper, which means lower express charges, and with three main line railways to ship on conveniently, you are assured of less time in transportation. A young queen for each package. 2-lb. and 3-lb. packages and queens. Code prices.

L. L. FERESEE :: PINELAND, S. C.

!STOP!

If you are planning for package bees, don't go any further until you have our **NEW DEAL** on them. We can save you time, trouble and money.

Don't Delay—
Write Today.

URIAH APIARIES, Box A, Uriah, Ala.

PERSONALLY REARED Queens & Package Bees

	Italian Bees with Italian or Caucasian Queens	1-9	10-49	50-99
Two-Pound		\$2.65	\$2.55	\$2.45
Three-Pound		\$3.40	\$3.30	\$3.20

QUEENS, Italian or Caucasian — November 1 - May 31.

1 to 9 10 to 24 25 to 49 50 to 99

.85c .80c .75c .70c

Discounts from the price of 50—10% on orders of 100 to 249; 15% on 250 or more, Packages or Queens.

ROY S. WEAVER & BRO., NAVASOTA, TEXAS



Quality Bred Italian Bees and Queens

In addition to our regular strain of Italians we are prepared to furnish package bees of Jay Smith's strain, bred from his best breeders. These bees are proven producers and are very gentle. One of our 2-lb. packages stored better than 600 pounds of surplus honey last season. This may be a little unusual but if honey is your object you will find our bees unsurpassed. We offer highest quality which means more value for your money, plus full weights and service on any quantity. Safe arrival and satisfaction guaranteed. Order direct from this ad now without further delay and have your bees shipped in the spring when you want them.

CODE PRICES

QUEENS By MAIL PREPAID

1 to 9	each .85c
10 to 24	each .80c
25 to 49	each .75c
50 or more	each .70c
100 to 249	deduct 10%
250 or more	deduct 15%

3-LB. PACKAGES BEES with QUEENS, Express Collect.

1 to 9	each \$3.50
10 to 49	each \$3.30
50 or more	each \$3.20

100 to 249 packages,
deduct 10%.

250 or more packages,
deduct 15%.

Queenless packages, deduct
price queens.

Parcel post packages, add 20c
each.

Each additional pound bees,
add 80c.

Lewis Beware and Dadant's Foundation at Catalog Prices.

YORK BEE COMPANY

The Universal Apries

JESUP, GEORGIA

GASPARD'S

High Quality Golden and Three-banded Italian Queens and Package Bees for Spring 1934.

CODE PRICES

Nuclei Package with Queens—November 1 to May 31

1-Comb 2-Pounds of Bees, net	1 to 9	10 to 49	50 or more
1-Comb 3-Pounds of Bees, net	3.15	3.05	\$2.95 each
1-Comb 4-Pounds of Bees, net	3.95	3.85	3.75 each
2-Comb 2-Pounds of Bees, net	4.75	4.65	4.55 each
2-Comb 3-Pounds of Bees, net	5.65	5.55	3.45 each
2-Comb 4-Pounds of Bees, net	4.45	4.35	4.25 each
	5.25	5.15	5.05 each

Combless Packages with Queens—November 1 to May 31

2-Pound Package Bees, net	1 to 9	10 to 49	50 or more
3-Pound Package Bees, net	2.65	2.55	\$2.45 each

Queens—November 1 to May 31

1 to 9	10 to 24	25 to 49	50 or more
.85	.80	.75	.70

(Discount from price of 50—10% for 100-249; 15% for 250 or more—Packages or Queens.)

18 years' experience with queen breeding and package shipping. Prompt and efficient service, safe arrival and satisfaction guaranteed, and a health certificate with each shipment. Bees shipped when you want them any time after April 1st. 20% books your order, balance at shipping time.

Address J. L. GASPARD, HESSMER, LOUISIANA

Merrill's Quality



Bees Queens

Our 24th year breeding and shipping bees and queens of quality and we have plenty of bees and queens ready for you in this year 1934. We shipped the first package of bees out of the state of Mississippi.

We can give you excellent service and satisfaction.



Code Prices



Packages (with queens) November 1—May 31

	1-9	10-49	50 or more
Two-Pound	\$2.65	\$2.55	\$2.45
Three-Pound	3.40	3.30	3.20

Queens — November 1—May 31

1-9	10-24	25-49	50 or more
.85	.80	.75	.70

(Discounts from price of 50—10% for 100-249; 15% for 250 or more — Packages or Queens.)

First in quality and service.

MERRILL BEE COMPANY

Mississippi's Oldest Shippers

BUCKATUNNA, MISSISSIPPI

WANTED - HONEY

CARLOADS OR LESS CARLOAD QUANTITIES

White or Extra Light Amber Grading

Send us samples and best price, freight allowed New York.

HONEY PACKERS, Inc.

230 Park Avenue

New York City



BERRY'S RELIABLE PACKAGE BEES AND QUEENS

Forty Years of Selected Breeding — Twenty Years Shipping Packages

PURE THREE-BANDED ITALIAN BEES AND QUEENS

Our bees and queenbees are Accredited and Certified by the State of Alabama to be all we claim as to quality etc. Alabama package bees by test are proved to be the best. If you have not tried them let us prove this fact to you.

OUR U. S. CODE PRICES

Package Bees by express collect: 2-lb packages with selected untested guaranteed purely mated queens: 1 to 9, \$2.65 ea.; 10 to 49, \$2.55 ea.; 50 or more, \$2.45 ea.

3-lb. packages with select untested guaranteed purely mated queens: 1 to 9, \$3.40 ea.; 10 to 49, \$3.30 ea.; 50 or more, \$3.20 ea.

Selected untested warranted purely mated Queens: 1 to 9, 85c ea.; 10 to 24, 80c ea.; 25 to 29, 75c ea.; 50 and up, 70c ea.

10% discount on orders for 100 to 249, and 15% off of orders for 250 and up— package bees or queens.

Quality of our goods and service is guaranteed by us and backed up by the State of Alabama and the U. S. Government under the Code.

M. C. BERRY & CO., Box 684, Montgomery, Ala.

GET RUNNING'S AND GET HONEY BEES — THEY SATISFY

PACKAGES AND QUEENS ALL ITALIAN STOCK

Service guaranteed. Stock bred for honey-getting and gentleness. Apiaries accredited and certified by Alabama Department of Agriculture. Get our free circular. You can now get RUNNING'S Bees and Queens as cheap as others. Minimum Code Prices. All bees and queens shipped from our Alabama Apiaries.

DAVID RUNNING APIARIES
Sumterville, Ala. or Fillion, Mich.

BEE SUPPLIES



Write for our 1934 prices before placing your orders.

A. H. Rusch & Son Co.
Reedsburg, Wisconsin



Here it is!

Write for your free copy of this booklet. It tells how you can save by buying THRIFTY bees.

Our THRIFTY three-banded Italian bees are Accredited and Certified by the Alabama Department of Agriculture.

We offer baby bees, over weight packages and light shipping crates.

Write today for free booklet.

W. J. Forehand & Sons
Fort Deposit, Ala.
Breeders Since 1892.

Wanted Shipments of Old Combs for rendering into Wax.

WRITE FOR FULL PARTICULARS
THE FRED. W. MUTH CO.
PEARL & WALNUT CINCINNATI, O.

Package Bees and Queens Code Prices

From sunny Texas, they are bound to be young bees—little dwindling. Quick new bees from young queens—results in maximum crop. Write for full information.

VICTOR BROS., Uvalde, Texas.

Mention American Bee Journal when writing advertisers.

SMITH'S

Bees always stood for **QUALITY**, which means more now than ever, as all prices will be the same. Write for our folder and full information.

Standard Code Prices

N. B. Smith & Co.
CALHOUN ALABAMA

YANCEY HUSTLER BEES-QUEENS
will be ready to go North
promptly April 1st, as usual.
Yancey Bees, Yancey Service and Satisfaction,
all guaranteed.
CANEY VALLEY APIARIES
BAY CITY, TEXAS



Do You Live Near
MINNESOTA?

Get your bee supplies at Winona, Graceville, or Brainerd. Standard Lumber Co. always has a full line of Lewis Beeware--"Standard of the Beekeeping World"--and Dadant's Foundations -- "The Choice of Expert Beekeepers."

Three shipping points. Close to your home. Save money on your bee supplies. Write to

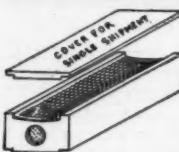
The Standard Lumber Company
Winona Graceville Brainerd
MINNESOTA



A GOOD RULE TO GO BY—
Buy Your Bees and Queens from
ALABAMA APIARIES
MT. PLEASANT, ALA.

Breeders of Italian Queens and Bees for over 15 years. Accredited and certified by Alabama Department of Agriculture. We support the American Honey Institute. Write for prices and further information.

THE PINARD NAILLESS QUEEN BEE SHIPPING CAGE



Send for Sample

Agents—
DIAMOND MATCH CO., Chico, Cal.
ROY S. WEAVER & BRO., Navasota, Texas
A. B. PINARD, Mfg., San Jose, Calif.

Carniolans - Caucasians

Prolific, very gentle, build up fine during spring, wonderful workers. Ask for free circular. 2-lb. packages with queens, both races, ready May 5th on. Queens in June. Code prices.

Albert G. Hann, Glen Gardner, N.J.

RENEW YOUR SUBSCRIPTION
NOW

A Message ————— To Western Beekeepers

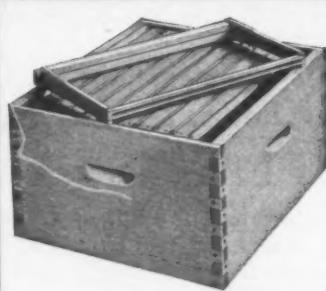
You will need more pounds of honey to pay for each package of bees in 1934.

The price schedule attached to the code of fair practices for package bee and queen shippers will, if approved, increase prices 50 to 100 per cent and more over the various prices prevailing in 1933. Your honey prices have increased a possible 20 per cent. Or have they?

We have the bees to get those extra pounds of honey you will need. We deliver them with a service available only to shipments from Sacramento. Through trains in every direction; fewer transfers, less delay, saving as much as 24 hours in transit.

We are honey producers in three Western states and know what you are up against. Write us about your problems. We can help you. Code prices, if approved. Liberal terms to reliable buyers.

DAVIS BROS. :: COURTLAND, CALIFORNIA



**Accurately Made Bee Supplies
for Western Canada Beekeepers**

Special Equipment Made to Order.

Write for Free Catalogue.

S. P. HODGSON & SONS
NEW WESTMINSTER :: BRITISH COLUMBIA

Packages

Buy direct from the producer, where SERVICE is considered obligatory. Your orders have our prompt personal attention, and our interest does not cease with booking your order and making shipment. Customers buying from us continually year after year is the best recommendation we can offer in solicitation of your business.

PRICES:

2-LB. PACKAGES WITH QUEENS		3-LB. PACKAGES WITH QUEENS	
1 to 9	each \$2.65	1 to 9	each \$3.40
10 to 49	each \$2.55	10 to 49	each \$3.30
50 to 99	each \$2.45	50 to 99	each \$3.20
100 to 249	each \$2.20	100 to 249	each \$2.88
250 or more	each \$2.06	250 or more	each \$2.72

Express Collect.

FINEST THREE-BANDED ITALIANS

All queens accompanying packages are Young Select Untested. Fresh from our own queen yards, and guaranteed purely mated.

QUEENS—Postpaid.

Select Untested. 1 to 9, each 85c; 10 to 24, each 80c; 25 to 49, each 75c; and 50 or more, each 70c.

We guarantee: Extra weight packages of a majority baby bees. Lightest approved shipping cages and crating. Shipment on date specified (weather permitting). Safe arrival in good condition. And freedom from disease. Fast through Express service and lowest rates to all points North, Northeast and Northwest.

Jensen's Apiaries :: Crawford, Miss.

Our Guarantee—Pure Italian Bees Service and Satisfaction

We guarantee to ship only pure Italian bees, all queens purely mated, safe arrival, freedom from disease. You can make money with our packages. Light cages that save express; quick express service.

Booking orders now at code prices. Help us to help you by ordering early.

CODE PRICES

Package (with queens) Nov. 1—May 31	50 or	1-9	10-49	more
Two-Pound	\$2.65	\$2.55	\$2.45	
Three-Pound	3.40	3.30	3.20	
Queens — Nov. 1—May 31				
1-9	10-24	25-49	50 or more	
.85	.80	.75	.70	

(Discounts from price of 50—10% for 100-249; 15% for 250 or more—Packages or Queens.)

G. E. Hummer Co.
Prairie Point, Mississippi



★ 1934 PROSPECTS ARE BRIGHTER ★

You have a right to expect prosperity if you do your share.

We are better equipped than ever to serve you satisfactorily and promptly.

Let us have your order for

PACKAGE BEES AND QUEENS

J. W. D. LULLO ∴ Anderson, Calif.

NORMA'S APIARIES COMPANY

We are now booking orders for package bees, nuclei, and queens for Spring 1934, prices as follows:

CODE PRICES—Comb Packages with Queens (Express Collect) Nov. 1-May 31.

1 Comb, 2 Pounds of Bees	\$3.15	\$3.05	\$2.95 each
1 Comb, 3 Pounds of Bees	\$3.95	\$3.85	\$3.75 each

Combless Packages with Queens (Express Collect) Nov. 1-May 31.

2-Pound Packages	\$2.65	\$2.55	\$2.45 each
3-Pound Packages	\$3.40	\$3.30	\$3.20 each

If larger packages are wanted: for each additional pound of bees add 80 cents. For each additional comb add 50 cents.

(Discount from price of 50: 100 to 249 packages, nuclei or queens, 10%; from 250 or more packages, nuclei or queens, 15%)

Address—

NORMA'S APIARIES CO. ∴ Hessmer, La.

STRAWBERRY PLANTS

We are offering four varieties which are most popular for all seasons in the middle west. Plants are shipped direct from Pellett Gardens at Atlantic, Iowa. Orders are filled promptly with fresh dug vigorous young plants.

VARIETIES:

For early fruiting, we offer Premier and Blakemore. Premier ripens first but Blakemore is a better plant maker.

For mid-season Senator Dunlap is by far the most popular sort. For late Aroma is a dependable variety.

STRAWBERRY PRICES

	Per 100 Postpaid	Per 200 Postpaid	Per 100 Express Collect
Dunlap	\$1.00	\$1.75	\$2.50
Premier	1.25	2.25	3.50
Blakemore	1.25	2.00	3.00
Aroma	1.25	2.00	3.25

SPECIAL OFFER—50 Plants each of above four varieties (200 plants) postpaid for \$2.00

OUR SHIPPING SEASON—APRIL 1st TO MAY 10th

100 plants will set from 100 to 150 ft. of row. Complete planting instructions sent with order.

RED RASPBERRIES—Latham or Chief
Per 25, \$1.25 Postpaid Per 100, \$2.25 Express collect.

Address All Orders To

DADANT & SONS ∴ Hamilton, Illinois

Work More - Earn More - Spend More in '34

BASSETT'S Package Bees and Queens PURE ITALIAN STOCK

CODE PRICES

ANNOUNCING—We have moved to SUTTER CITY, CALIFORNIA, fifty miles north of Sacramento where we will be pleased to serve all our old customers, as well as new. Earlier season for queen rearing, and lower express rates to the north, with same rates as before to the east, have prompted our move. All shipping will be from Marysville, California, located on main line of Southern Pacific R. R.

We want your order large or small, and are prepared to meet your DEMAND for highest quality in bees and queens. Write us for shipping rates.

Guarantee: Safe Arrival. Satisfaction. NO DISEASE.

IXL APIARIES C. Bassett, Prop. SUTTER CITY, CALIF.
Member California Bee Breeders' Association.

Your Display or Classified Ad in A-B-J Brings Results That Please!

WE ALL AGREE

that strong colonies pay best. Strong colonies can only be obtained from prolific queens. I have always chosen the largest queens for breeders. Thirty years' selection from many thousands has given us a larger worker and queens with more egg tubes. Such queens are very prolific. An expert entomologist by actual count report our queens average ten egg tubes more than those of many tested. Just got a letter from H. R. Busch of New Zealand who writes, "The three Breeding Queens arrived in fine shape. We have reared about 60 queens from them and are highly pleased with their size and color. We have found that your queens fill the frames with eggs much more quickly than any queens we ever had." And just think of it! this, too, after those three Breeders had traveled half way around the world! It takes queens with great vigor to do that and still be extremely prolific. Many write us that our queens are regular egg machines. This careful breeding selecting and requeening whenever we find better queens costs money and labor. Still our prices are very low when quality is considered. Prices: 1, \$1.00. 5, \$4.75. 10, \$9.00. Breeders with $\frac{1}{2}$ -lb. of bees, service guaranteed through 1934, \$7.50. Write for our free book "About Bees" which is a brief treatise on beekeeping.

JAY SMITH, VINCENNES, IND.

GOLDEN ITALIANS

Remember well and bear in mind, That better bees & queens are hard to find.

Ours are those large, yellow, gentle bees that are such excellent honey producers.

Our queens are large, uniform, and very prolific. Caged the day shipped and reach their destination fit as a fiddle and ready to lay.

We have been shipping package bees eight years and have satisfied all our customers with our quality product and promptness.

Code prices. Write for descriptive circular.

STEVENSON'S APIARIES WESTWEGO, LOUISIANA

BEES

Packages and Queens at Code Prices.

Diamond Quality foundation, beehives, bee supplies. Shippers of excellent quality. Order from a large reliable firm. Satisfaction is guaranteed.

THE DIAMOND MATCH CO.

Manufacturers, Dealers, Retailers

Chico and 1797 Pasadena Ave., Los Angeles, Cal.

LADY-LIKE CAUCASIANS

Our Mating Guarantee Is Your Protection

The stock is true. The breeders are well selected. Every queen is mated to a Caucasian drone.

Send for Free Caucasians Circular and 1934 Prices

Caucasian Apiaries, Brooklyn, Ala.

ATTENTION BEEKEEPERS !

This is to notify the beekeepers of the WORLD that I have sold to Mr. Wallace R. Smith all bees, breeding stock, supplies, equipment and good will of my father, the late John M. Davis, of Spring Hill, Tenn.

Mr. Smith will move the queen yard a few miles south and will give the same courteous attention to inquiries and orders that my father did.

Sincerely,
BEN G. DAVIS (Admr.).

THE BEEKEEPERS ITEM

The Southerner beekeeper's own magazine, but read by honey-producers everywhere. Combined with the American Bee Journal makes a combination that covers the beekeeping field.

Send \$1.50 and get both magazines for a full year.

BEEKEEPERS ITEM, San Antonio, Tex.

Crop and Market Report

Compiled by M. G. Dadant.

For March Crop and Market page, we asked reporters to answer the following questions:

1. How nearly is the honey crop sold?
2. Any advance in price?
3. How are bees wintering?
4. What about crop prospects?
5. Any lessening of increase on account of package bee code prices?

Is Honey Crop Sold?

Strengthening our report in the February issue of the American Bee Journal, the reports coming in this month indicate that a very large proportion of the crop is sold and that there will be no difficulty in disposing of the balance before the new crop is harvested. As a matter of fact, the only reason why the entire crop is not out of the hands of the producers by this time is that there is a number of producers who have been holding for a more satisfactory price. No doubt all honey could have been sold at 1932 prices without difficulty.

As it is, the northeastern states are well cleaned up, the entire Southeast except perhaps a few lots in Florida seem to be very well sold out. Pennsylvania reports considerable honey on hand. Also a number of Michigan beekeepers are holding for a stiffer price and the same holds true for Minnesota.

Throughout the Central West and plains states, the crop seems to be at least 85 per cent sold. We find a number of carloads still held along the western slope in Colorado and similarly some quantities in Idaho and Utah and Montana chiefly because they wish a price advance over what was offered earlier.

The Pacific slope also seems very well cleaned up and all in all it does not seem like there will be very much difficulty in clearing up the entire quantity of honey left on hand. One thing has particularly struck the writer and that is that amber honey is in demand to such an extent that it demands almost as good a price as does the lighter honeys. We have learned that several lots of ten cases and fifty cases are moving in the Central West at approximately 6 cents f.o.b. producer's shipping point. Most of it, however, has been moving at from 5 cents to 5% cents f.o.b. producer's station. This is quite an appreciable advance over a year ago. White clover honey on the other hand is with difficulty getting a price of 6 cents f.o.b. producer's station. In fact we know of a number of producers who are holding for the 6 cent price and have not yet sold.

Price Advances.

In practically all instances, our producers report that retail prices have advanced none or very little since the fall prices were laid down. In fact very few advances over 1932 prices. However, in the past few days, reports have come in of an appreciation of approximately $\frac{1}{2}$ cent to 1 cent per pound in prices being charged to grocers so that the advance has at last perhaps arisen.

There does seem to be a considerable appreciation in price of larger jobbing lots on honey over what they were when our last report was written. We would anticipate that amber honeys particularly have advanced because of their scarcity. White honeys have advanced perhaps less but are becoming scarcer and perhaps a little stiffer in price. All in all it does seem like the possibilities of the market are opening up for the 1934 crop at an advance over the close of 1933.

Bees Wintering.

Bees seem to be wintering satisfactorily throughout the country. The only questions being raised as to whether the extreme long cold spell in the northern sections and particularly in the Northeast are going to cause heavy winter losses, particularly in those bees which have been

wintered out of doors. Cellar wintered bees in the same sections seem to be faring very satisfactorily.

In the southern states and throughout the Central West and in fact into the plains and mountainous territory, bees are wintering exceedingly well but the warm weather has caused heavy consumption of stores and there is some question whether heavy feeding will not have to be done this spring to obviate the increased amount of honey used during the warm winter.

The same holds for New Mexico and Arizona.

Crop Prospects.

We do not remember in recent years having reports of prospects in the United States being any poorer than they are this year.

This is caused largely by the fact that there has been an absence of moisture throughout the whole Central West and extending through the plains area and into the Rocky Mountain region. The surface moisture in the intermountain territory apparently has been sufficient but there has not been sufficient snow to store up for irrigation purposes and there is some doubt as to whether there will be enough although, of course, we are still a month away from spring weather.

Those sections which are reporting best crop prospects are those in which there have been good snows in the North, particularly North Dakota, northern Minnesota, Wisconsin, Michigan and throughout practically all of the eastern areas where the snows have been heavy. The same is true of the Canadian provinces all of which seem to be blessed with large quantities of snow from west to east.

Also we find abundant moisture in Texas and practically all the states lying to the east.

Although perhaps sweet clover areas have not so far been badly hurt by the drought, there is no doubt but that white clover is going to suffer in all areas where there has been a dry bare ground since way last fall. In our own locality here we cannot expect very heavy crops even with abundant moisture during the balance of the winter and spring.

Less Package Bees.

Reporters seem to be almost evenly divided as to whether or not less package bees are going to be used this year than a year ago. Some of the heavier producing areas report beekeepers on a strike against package bees and similarly in other sections the report goes out that beekeepers are encouraged with the quick sale and the price of honey and are going to increase regardless of price of package bees. It does seem like the code prices in sections where honey was not appreciably higher than last year are going to restrict the purchases of packages or queens this year and some reporters have stated that they are going to make their own increase and even rear their own queens.

In other instances reporters state that they think they are to get value received for the additional price paid according to the code because they believe it will make for prompter deliveries and more satisfactory packages in every way.

The thing that struck the writer on this answer to this question was that there still apparently are many areas in which package bees do not enter into any consideration. Nearly half of the reporters stated that their sections were not interested in package bees and never had purchased sufficient quantities to warrant an answer to this question. This brings the fact before us that undoubtedly there is still a latent area where package bees have still not entered either because the old methods of increase have not been abandoned or the express rates are sufficient to make such bees almost prohibitive.

Are You Ready for Next Season?
Have you gone over your equipment? Have you plenty supplies? Advertisers in the American Bee Journal will welcome any inquiry sent to them.

Renew Your Subscription
Write for Our Special Club Offers
AMERICAN BEE JOURNAL

Edwin H. Guertin 201 N. Wells St.
Chicago
Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or
Bradstreet's Commercial Reports.

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

BUY THE BEST package bees and queens for 1934. We have them. Vigorous, gentle, disease resistant, three-banded Italians. Best honey producers. Write for information and prices. H. C. Short, Fitzpatrick, Alabama.

TEN YEARS with Caucasian Bees. Write for description and prices of our select bred gray mountain bees for 1934. Bolling Bee Co., Bolling, Alabama.

"**SHE-SUITS-ME**" Italian queens at code prices. Allen Latham, Norwichtown, Conn.

CAUCASIANS — Northern bred, shipments June 1st. Twenty-four hour service, satisfaction guaranteed. Code Prices. Russell-Barnes Apiaries, Morrill, Nebr.

QUALITY ITALIAN package bees and queens—mountain reared to produce the hardiness of the North. Code prices. Mt. Lassen Honey Co., C. G. Wenner, Mgr., Paynes Creek, California.

CAUCASIAN queens from northern acclimated, tried, gentle, selected stock that give results. Select untested, 20 up, 75c. Less than 20, 80c. June delivery. Wanted, clean used ten-frame equipment. Bird's Apiaries, Odebolt, Iowa.

ITALIAN queens. Northern bred. Delivery June 1st. Eugene Gordon, North Platte, Neb.

THREE-BANDED Italian bees and queens that are real honey gatherers and gentle to work with. Write for circular. Alamance Bee Co., Graham, N. C.

GOLDEN ITALIAN queens ready for shipment about March 15 at code prices, good honey producers and gentle. A. M. Kelly, Bell, Fla.

CAUCASIAN queens, ready April 1st. 1 to 9, 85 cents; 10 to 24, 80 cents; 25 to 49, 75 cents; 50 or more, 70 cents. Safe arrival, satisfaction. Tillery Brothers, Greenville, Ala.

PACKAGE BEES AND QUEENS for 1934. Three-banded Italians. We supply you with quality bees, best young queens. Every package overweight to insure full weight when they reach you. Two-pound packages with queens, \$2.45 each. Three-pound packages with queens, \$3.20 each, in quantities. Prompt shipment and safe arrival guaranteed. Health certificate with all shipments. Little River Apiaries, Box 88, Gause, Texas.

CARNIOLAN and golden queens and package bees. Write for prices. C. B. Bankston, Buffalo, Texas.

GOLDEN Italian queens that produce good workers, gentle to handle, safe arrival and satisfaction guaranteed at code prices. Tested, \$1.70. I can mail these when weather is warm enough. Untested about May, 85c. D. T. Gaster, R. No. 2, Randleman, N. C.

HONEY FOR SALE

CHOICE Michigan Clover Honey. New 60's. David Running, Fillion, Michigan.

HONEY FOR SALE—Keep your customers supplied with honey. We can furnish white and light amber honey at attractive prices. Packed in 60-lb., 10-lb. or 5-lb. tins. Dadant & Sons, Hamilton, Ill.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. A. I. Root Co. of Chicago, 224 West Huron St., Chicago, Illinois.

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

WHITE CLOVER extracted honey, sample 15c in stamp. Kalona Honey Co., Kalona, Iowa.

FOR SALE—Well ripened clover honey, carlot or local shipments. Will be pleased to submit sample. Also new crop section comb honey, in carrier crates of four or eight cases. The Colorado Honey Producers' Association, Denver, Colorado.

FINE QUALITY ORANGE, palmetto and mangrove honey in new sixties. Sample 6c. Peter W Sowinski, Ft. Pierce, Florida.

FANCY COMB HONEY and Chunk Honey in 5-pound pails. F. W. Summerfield, Grand Rapids, Ohio.

VERY FINEST clover honey, \$7.20 per case. C. Jankowski, Gurnee, Illinois.

FOR SALE—Sixty cases No. 1 Comb Honey, six case lots, \$2.50 per case. N. B. Querin & Son, Bellevue, Ohio.

HONEY AND BEESWAX WANTED

WANTED—HONEY and BEESWAX. Beekeepers will find it to their advantage to communicate with us. Please send samples, state quantity available and prices. CALIFORNIA HONEY COMPANY, Hamilton & Company, Agents, 108 W. Sixth Street. Los Angeles, California.

WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—Carlot or less of extracted white or amber clover honey. Clover Blossom Honey Co., 712 Kossuth St., Columbus, O.

FOR SALE

VERY PROFITABLE BEE BUSINESS for sale in Canada. Sacrifice price. Address Box S, American Bee Journal.

48 COLONIES BEES and equipment, no disease. Sacrifice price. Harry Thomas, Lakewood, Wis.

FOR SALE—100 ten-frame two-story Italian bees for \$500.00 on yard. W. A. Wiley, West Point, Miss.

THIRTY new ten-frame, double story, Langstroth Simplicity beehives, complete. Also other supplies. Make offer. Wm. Schafer, Eddyville, Iowa.

WANTED

WANTED—100 strong colonies of bees. C. Jankowski, Gurnee, Illinois.

WANTED—Helper in my Michigan Apiaries. Give age, weight, height and experience. Board and room furnished. State wages wanted and full particulars. Also references. David Running, Fillion, Mich.

WANTED—To trade bee supplies for bees and queens. The Hubbard Apiaries, Onsted, Mich.

WANTED—To correspond with Nazarene and other Christians who would like to buy from a Christian beekeeper. Calvert Apiaries, Calvert, Ala.

WANTED—Experienced bee man for the coming season. Single man preferred. Art. Schultz, Ripon, Wis.

YOUNG MAN experienced with small apiaries wants job as helper for coming season. Anthony Rejman, Venice Center, N. Y.

EXPERIENCED QUEEN BREEDER wants position. Write E. F. Day, Honoraville, Ala.

SUPPLIES

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

PORTER BEE ESCAPES save honey, money, avoid stings; faster most efficient. Sample 15c. R. & E. C. Porter, Lewistown, Ill.

DIFFERENT, that's all. Written and published for the instruction of beekeepers. 52 pages of breezy entertaining beekeeping comment each month. One year, \$1.00; two years, \$1.50. Sample, 3c stamp. The Beekeepers Item, San Antonio, Texas.

SAVE queens. Safin cages now 15c. Ten for \$1.00. Allen Latham, Norwichtown, Connecticut.

FOR SALE—Comb foundation at money saving prices. Plain, wired and thin section. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

FRAMES—\$3.85 per 100. Other supplies and package bees at special prices. Send for list today. Northern Bee & Honey Co., Osceola, Wisconsin.

VEILS—Handy net style, 13c each postpaid; 2-frame nucleus shipping boxes, 5c. 2-pound combless package shipping boxes, 6c. 3-pound, 6c each. Write for bargain list books, brushes, box seats, feeders, extractors, shipping cases, excluders, toys, F.O.B. Lewis warehouses. Subject to stock close out prices. G. B. Lewis Company, Watertown, Wis.

READY WIRED FRAMES. Just what you have been looking for. Each frame contains four horizontal wires, permanently fastened. Shipped in the flat. Ask for literature. A. E. Wolkow, 384 State St., Hartford, Wis.

MISCELLANEOUS

DEAR IOWA BEEKEEPER—Drive over to Colo, Story Co., Iowa, and learn how to secure one-third or more honey this summer, with less expense. Bring frame top bar and another bee man, this month. In four white clover years secured 140,000 lbs., round 200 colonies spring count. The new way of beekeeping. Delbert Lhommedieu, Colo, Iowa.

TRUE VITEX SEED, 50 cents an ounce. Instructions to grow. Chas. Ferguson, 3803 Madison, Fresno, Cal.

HONEY LABELS and printing. Catalog and samples free. Correspondence solicited. Traders Printing Company, Springfield, Mo.

PLANS FOR POULTRY HOUSES — All styles; 150 illustrations. Tells you the type to build for your particular locality. Secret of getting winter eggs, and copy of "Inland." Send 25c. Inland Poultry Journal, Spencer, Indiana.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

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The new ALL AMERICAN is a small, compact, riding Tractor designed for few-acre farmers, country estates, commercial growers. Plows, harrows, cultivates, seeds, and does many other jobs at low cost. Foot lift tools. Delightfully easy to guide and operate. Write Donald & Boerner Co., Dept. 7, Milwaukee, Wis.

Koehnen's Package Bees Italian Queens from Northern California

More than five thousand colonies, twenty-six years experience, dependable service.

Prices subject to Marketing Agreements

Reference:
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SEEDS of HONEY PLANTS

HYSSOP	per pkg.	10c
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American Bee Journal, Hamilton, Ill.

Louisiana Southern Bee Farms

Whether you are buying bees for profit or pleasure you have an equal right to demand quality, service and satisfaction. Give us your order and ask us for the rest.

SATISFYING SERVICE SAVES**PRICES AS FOLLOWS:**

	1-9	10-49	50-99	100-249	250 up
2-pound Packages	\$2.65	\$2.55	\$2.45	\$2.21	\$2.09
3-pound Packages	\$3.40	\$3.30	\$3.20	\$2.88	\$2.72

QUEEN PRICES:

1-9	10-24	25-49	50-99	100-249	250 up
.85	.80	.75	.70	.63	.59½

We give you the benefit of the lowest code prices, purest Italians and as prompt service as is possible to give.

Louisiana Southern Bee Farm, Rt. 2, Baton Rouge, La.



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"ST. ROMAIN'S HONEY GIRL" ITALIANS

They are Gentle, Thrifty and Hardy. Fifteen Years of Selective Breeding.

At Minimum Prices fixed by Code—November 1 to May 31.

(With select queen)	(1 to 9)	(10 to 49)	(50 to 99)
Two Pounds Bees, Combless	\$2.65 each	\$2.55 each	\$2.45 each
Three Pounds Bees, Combless	3.40 each	3.30 each	3.20 each
Two Pounds Bees and 1 frame nucleus	3.15 each	3.05 each	2.95 each
Two Pounds Bees and 2 frames nucleus	3.65 each	3.55 each	3.45 each

Larger Packages, for each additional pound of bees, add eighty (80) cents.

Every package packed overweight to insure full net weight when they reach you. Select Untested Queens, 1 to 9, 85¢ ea.; 10 to 24, 80¢ ea.; 25 to 49, 75¢ ea.; 50 to 99, 70¢ ea. (Discounts from prices of 50—10% for 100-249; 15% for 250 or more Packages or Queens.) Under Code Agreement you are guaranteed prompt service and safe delivery; to this we add quality, the result of fifteen years of Selective Breeding, and the advantage of fifteen years' experience producing and shipping package bees and queens. Orders booked in advance, shipping date reserved for 20% deposit.

Circular Free.

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AMERICAN BEE JOURNAL, Hamilton, Illinois

BEES - QUEENS - Will Trade for Honey**Prices—**

Queens—November 1 - May 31

Packages (with queens)

November 1 - May 31

50 or

1-9	10-24	25-49	more	50 or	1-9	10-49	more
.85	.80	.75	.70	2-Lb. ---	\$2.65	\$2.55	\$2.45

(Discounts from price of 50; 10% for 100-249; 15% for 250 or more—Packages or Queens.) Full information on request.

HOMER W. RICHARD, ELDORADO, ARKANSAS

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

The Canadian number of this magazine brings back to me some red letter days spent in Canada. On my first visit to that country I was a visitor in the Pettit home and formed the acquaintance of Miss R. B. Pettit, who later died in Arizona. A former school teacher, she was a very thorough student of bees as well as a practical beekeeper.

Another delightful memory is of visits with F. W. L. Sladen, former Dominion Apiarist. Sladen was a thorough-going scientist and a capable man, but like many men of scientific attainments somewhat peculiar. He was a speaker at the summer short course at the college at Guelph. Noting that a man on the front seat was keenly interested in his talk, Sladen found himself talking more and more directly to this particular person. Finally he seemed to lose consciousness of his surroundings and was holding a private conversation with the interested individual. He had forgotten his audience and walked over very close to the object of his special attention.

Never can I forget a day with W. J. Sheppard in his garden at Nelson, British Columbia. There were 700 named varieties of flowers growing on the small space of about three or four city lots and an amazing garden it was. His beehives were in a row among the flowers, a most appropriate setting for an experimental apiary.

Another outstanding spot was the Beaver Lodge Experiment Station, in far Northern Alberta, where in summer it is still daylight at 10 P. M. In fact, the Dominion Apiarist who was there helped to hive a swarm of bees at that hour. D. W. Albright was just then surprising the world with a demonstration that bees could really be a source of income in the north country and that good crops of fine honey could be harvested there.

I am reminded also of a surprise visit paid by a skunk to one of Floyd's summer meetings in the country near Winnipeg, and the commotion it made when the crowd discovered its presence. Some of my friends felt that I failed to uphold the American tradition when I was forced to admit that I was not sufficiently familiar with the rules of baseball to act as umpire for the big game held that day.

There is a special obligation which I hope some day to pay to Finlay and Turnbull, of British Columbia, for a fishing trip far out to sea. It was my first experience with deep-water fishing and I learned a lot that day. The fish dinner served by a group of the beekeeping ladies on our return that night was a feast for kings. It seemed to me that it would be a dumb fish that would bite that big bare hook with its shiny spinner, but I did land two dandies. After fishing for bullheads in a muddy mid-western stream a three-foot fish looked like a whale to me.

And then there was J. W. Winston, the Canadian naturalist, who was a congenial spirit, interested in all the things that interested me. Whether it was a bird or a bee, a flower or a tree, Winston was interested and he knew its secrets. Some wonderful forest giants remained beside his door in a neighborhood where the lumberman had left but little behind.

And there were many, many more interesting personalities over the line whom it would be a joy to meet again. How short sighted we are to put up barriers to prevent trade between the countries when the Canadians have so many things which we need and we have so much which would be useful to them. I have found the Canadians delightful people and this special Canadian issue makes me wish to go back and see them again.

Visitors from other countries must think that we Americans are a queer lot. We feel that we must regulate every detail of conduct of our fellows. If a man appeared on the street with a bottle of beer and a ten dollar gold

piece the element of time determines his public relation. Ten years ago he would have been arrested for having the beer; today he would be arrested for having the gold.

A correspondent from New England wants to try sourwood as a source of honey. He has noticed that it grows along with black locust and since the black locust does well with him he assumes that sourwood will also. I fear that he will be disappointed. The black locust tree is tolerant of soil conditions and does well on a great variety of soils. The sourwood tree succeeds only on very acid soils and is confined to a rather limited range in the southeastern states. Where it will succeed it provides a fine quality of honey.

A letter from Missouri asks what kind of seed to use for feeding wild birds in winter. Sunflower seed is one of the best. A good variety, however, is desirable. Use wheat, cracked corn, cane or kafir and any other seed available. Screenings from a seed cleaning machine serves very well as it provides a variety of weed seeds and has the advantage of being very cheap.

The wax moth appears to have been introduced into this country in 1805 and as is usual when a new pest appears proved very destructive. It is recorded in early editions of Langstroth's book that the moth was much more destructive the second year than at any subsequent time. Nature has a way of making adjustments to new problems and they are less serious as time goes on.

S. F. Haxton, of Philadelphia, asks who should get the credit for the carbolized cloth in removing honey and adds that it is more efficient than smokers or escapes. There are references to carbolized cloths in the bee magazines for a long time back but who thought of it first appears to have been lost. Can anybody answer?

Haxton also inquires whether Dr. G. L. Tinker is the inventor of the queen excluding zinc or whether he merely improved it. The excluder seems to have been a very gradual development and was in use in Europe before American beekeepers came to realize its value. Tinker appears to have invented a machine for cutting the perforations in large sheets of the zinc and to have made available for common use among the beemen. In England the excluders were first made with round holes. When the worker bees passed through they lost the balls of pollen on their legs.

E. H. Busler, of Rockport, Indiana, writes that "Bees are like checker games; the moves we make now are the forerunners of either success or failure. What we learn today is subject to correction by 'the next mail'"—an interesting statement and apt comparison.

Clarence P. May, Sr., of Andover, Mass., writes that he has his bees packed in tar paper, one in a Buckeye hive and one in a government packing case. The one in the government case has lost about two quarts of bees while the others are OK. I found out twenty years ago that bees do not winter well with heavy packing in severe winters such as we sometimes have in Iowa. Similar reports have come to us from many localities and there now remain few who still depend upon heavy packing for outdoor wintering. Surprising as it may seem such packing seems to do better in mild climates than in severe ones.

The depression has set a great many people to thinking of a home in the country where they can raise a part of their living and be free from some of the discomforts which go with the loss of income. Many of these people still wish to continue the work with which they are already familiar and look upon the land only as a place to live rather than a place of business. Such persons turn to beekeeping, gardening and poultry raising as spare time occupations.

FRANK C. PELLETT.